SOCIETY OF AMERICAN FORESTERS 1900

Journal of FORESTRY

January 1961
Volume 59
Number 1

GET ON THE BALL WITH INDIAN FIRE PUMPS

"The World's Best"

Miss Jean Moorhead, a former Miss Hollywood and entrant in the Miss Universe contest.

No fire fighting equipment is complete without an ample supply of **INDIAN FIRE PUMPS!** These all purpose back-pack extinguishers have been first choice for over 30 years! Many pumps bought 25 years ago are still in service.

When you buy **INDIANS** you get the best portable fire fighters that can be made . . . a product of a company founded in 1888. **SAVE TIME . . . SAVE MONEY . . . SAVE EFFORT . . .** always use **INDIAN FIRE PUMPS!**

"Most Enthusiastic About INDIANS"

"We have a number of No. 90 solid brass **INDIAN FIRE PUMPS** on all our equipment. We prefer them to any other hand extinguisher. The men will not use anything else. We are most enthusiastic about **INDIANS.**"

George P. Lasher,
Fire Chief

THREE GREAT MODELS TO CHOOSE FROM

No. 90 INDIAN FIRE PUMP

The popular sliding pump type with Armco Zinc Grip steel, solid brass or chrome tanks.

NEW FIBERGLASS No. 90 MODEL

Nothing else like it. Light weight but strong and durable. Will not rust or corrode. Solid brass pump. Circular on request.

No. 80 MODEL

For those who prefer the lever type pump and handle. Armco Zinc Grip steel, solid brass or chrome tanks.

ALL TYPES APPROVED BY FACTORY MUTUAL

SEND FOR NEW CATALOG

D. B. SMITH & CO. "FOR 73 YEARS THE LEADERS" **407 Main St., Utica 2, N.Y.**

Pacific Coast Branches.

Hercules Equipment & Rubber Co., Inc.
San Francisco 7, Calif.
San Jose, Calif.

Halprin Supply Co.
Los Angeles 15, Calif.

Fred E. Barnett Co.
Portland, Ore.

Fred E. Barnett Co.
Klamath, Ore.

Mill & Mine Supply Inc.
Seattle 4, Wash.

L. M. Curtis & Sons
Salt Lake City, Utah

Canadian Agents:

Flark Bros. Ltd.
Vancouver, B. C., Canada

C. E. Hickey & Sons, Ltd.
Hamilton, Canada

VOLUME 59
NUMBER 1

Journal of Forestry

JANUARY 1961

EDITORIAL STAFF

ARTHUR B. MEYER ..... *Editor*
HENRY CLEPPER ..... *Managing Editor*
L. AUDREY WARREN ..... *Business Manager*

Associate Editors

JAMES S. BETHEL, *Forest and Wood Utilization*, National Science Foundation, Washington 25, D. C.

C. ALLEN BICKFORD, *Mensuration*, Northeastern Forest Experiment Station 102 Motors Avenue, Upper Darby, Pa.

ROBERT L. FURNISS, *Forest Pathology and Entomology*, Pacific Northwest Forest and Range Experiment Station, P. O. Box 4059, Portland, Ore.

OTIS F. HALL, *Forest Management and Engineering*, Department of Forestry and Conservation, Purdue University, Lafayette, Ind.

LEE M. JAMES, *Forest Economics and Policy*, Department of Forestry, Michigan State University, East Lansing, Mich.

ROBERT D. MCCULLEY, *Silviculture*, Lake States Forest Experiment Station, 300 Green Hall, St. Paul Campus, University of Minnesota, St. Paul 1, Minn.

LANSING A. PARKER, *Forest-Wildlife Management and Recreation*, Bureau of Sport Fisheries and Wildlife, U. S. Department of the Interior, Washington 25, D. C.

SCOTT S. PAULEY, *Forest Genetics and Artificial Regeneration*, School of Forestry, University of Minnesota, St. Paul 1, Minn.

CHARLES E. POULTON, *Range Management*, Range Management W-302, Oregon State College, Corvallis, Ore.

WILLIAM E. REIFSNYDER,, *Forest Fire*, School of Forestry, Yale University, New Haven 11, Conn.

SIDNEY WEITZMAN, *Watershed Management*, Lake States Forest Experiment Station, 300 Green Hall, St. Paul Campus, University of Minnesota, St. Paul 1, Minn.

LLOYD THORPE, *Advertising Representative*, 766 Dexter Horton Building, Seattle 4, Wash.

The JOURNAL OF FORESTRY, established in 1917, is the official organ of the Society of American Foresters, but the Society assumes no responsibility for the statements and opinions expressed by contributors.

Publication office, 425 Mills Building, 17th Street at Pennsylvania Avenue N. W., Washington 6, D. C. Address all correspondence concerning editorial or business matters to JOURNAL OF FORESTRY, 425 Mills Building, 17th Street at Pennsylvania Avenue N. W., Washington 6, D. C. Published monthly. Subscription $9.00 per year; single copies $1.00. Missing numbers will be replaced without charge provided claim is made within thirty days after date of the following issue.

The editors are not responsible for loss or damage of manuscripts and photographs while in transit or in their possession. All material submitted for publication should be accompanied by return postage.

Copyright, 1961, by the Society of American Foresters. Second class postage paid at Washington, D. C. and at additional mailing offices.

CONTENTS

COVER: Upper bridge at Farnsworth Creek, snow 16 inches deep, Allegheny National Forest, Penna.
Photo U. S. Forest Service, by H. Morin

The 60th Annual Meeting 3

Society of American Foresters Presents Two Awards at 60th Annual Meeting 4

Timber Depletion—Federal Income Tax ..... Nelson T. Samson 8

Western Redcedar Poles from British Columbia ..... I. V. Anderson 14

Changes in Radial Symmetry in the Leaders of Eastern White Pine Following Inclination ..... Arthur H. Westing 17

Soil Moisture-Seedling Growth Relations in Conversion Planting of Oak Ridges to Pine ..... H. L. Williston and D. C. McClurkin 20

Notes and Observations 24

Shortleaf-Loblolly Reproduction Losses Moderate Following Seed Tree Felling; Soil Settlement Caused by Tree Roots; Still Another Explanation of the Theory Behind Point Sampling.

Points of View 27

Registration of Foresters—The Negative.

Book Reviews 29

Hermann von Schrenk: A Biography; Power to Produce: The Year Book of Agriculture; The Vegetation of Wisconsin; Meet the Natives.

Current Literature 32

Society Affairs 33

Forestry News 61

Index to Advertisers 68

Consulting Foresters 69

Add These Two NEW Resources Books

Our National Park Policy
A CRITICAL HISTORY

by John Ise

704 pages: $10.00

Ratifying his position as an expert analyst of the country's conservation problems, John Ise reports the political and administrative struggles behind our present-day park policy and analyzes the persistent park problems.

Energy in the American Economy, 1850-1975
ITS HISTORY AND PROSPECTS

by Sam Schurr, Bruce Netschert, et al.

800 pages: $12.50

Published for Resources of the Future, Inc., this book provides a history of energy since the 19th century, discusses its uses and prospects until 1975 and examines the relations between energy use and economic growth in this country and its implications for the future.

to your Resources Library

The Forest Ranger
A Study in Administrative Behavior

by Herbert Kaufman

288 pages: $5.00

"This book is an excellent piece of research and writing about a very fundamental problem in public administration . . . It will be of special interest to foresters and land management and personnel experts."

—Personnel Administration

The Federal Lands
Their Use and Management

by Marion Clawson and Burnell Held

584 pages: $8.50

"This is the most complete treatise ever published on the subject of Federal Lands."—*U.S. Dept. Agriculture*

Science and Resources
Prospects and Implications of Technological Advance

edited by Henry Jarrett

250 pages: $5.00

"As the population of the earth continues to grow and as the inhabitants of this planet make ever increasing demands upon its resources, more and more attention is being focused on questions relating to the compatibility of future supply of and demand for these resources . . . commendable for the wealth of scientific raw materials presented, and for the lucidity of the presentation."

—The Washington Post

Regions, Resources, and Economic Growth

by Harvey Perloff, Edgar Dunn, Jr., Eric Lampard and Richard Muth

800 pages: $12.00

This book is a major step toward understanding the causes and patterns of regional economic growth, with special attention to the role of natural resources in this development.

Perspective on Conservation
Essays on America's Natural Resources

edited by Henry Jarrett

288 pages: $5.00

"23 essays by some of the country's foremost thinkers in the economics, resources and conservation on fields . . . these experts critically appraise the conservation movement since 1908 and seek thereby to find new approaches to the problem as they project it 50 years into the future."

—National Parks

Technology in American Water Development

by Edward Ackerman and George Lof

710 pages: $10.00

"This book deals with water development but its thesis, approach and methodology are equally applicable to other resource classifications such as land, forests, minerals and nuclear energy . . . a standard reference work."

—National Civic Review

Multiple Purpose River Development

by John Krutilla and Otto Eckstein

310 pages: $4.50

"If better understanding grows out of clear, abundant and objective background information, then the authors will go far toward a realization of their stated objectives in this scholarly study."—*Current History*

order from your bookstore, or . . .

The Johns Hopkins Press

BALTIMORE 18, MARYLAND

Journal of Forestry

Official Organ of the Society of American Foresters

The 60th Annual Meeting

IN ACCORDANCE with its custom to hold decennial annual meetings in Washington, D. C., birthplace and headquarters of the Society of American Foresters, its 60th annual meeting was held in the nation's Capital. A total of 1,124 registered at the Sheraton-Park Hotel for the period November 13-16, 1960. Of this number 857 were members and guests, 267 were ladies. Forty-three states, the District of Columbia, and Canada, Mexico, Venezuela, Puerto Rico, and Turkey were represented.

Three days of formal meetings included a general meeting, a Society Affairs session, nine technical Division meetings, and the annual dinner. In advance of these the Council of the Society met on the morning of November 13, and again the afternoon of the 16th. A joint meeting of the Council and Section delegates was held on the afternoon of the 13th and other meetings during that day included the editorial board of the JOURNAL, the Association of Consulting Foresters, the SAF Planning Committee, and the Committee of Land Grant Colleges.

View of the rostrum as the opening session of the 60th annual meeting of the SAF was called to order. Ralph S. Hosmer, surviving Charter Member of the Society, sits at the far left, next to President Charles A. Connaughton.

The General Session

Henry J. Malsberger, SAF vice-president, served as chairman of the general session, held on the morning of November 14. Following welcoming remarks by SAF President Charles A. Connaughton, the theme of the meeting, "Forestry's Expanding Horizons," was elaborated upon by the following speakers: Chief Richard E. McArdle of the U. S. Forest Service spoke on the subject of "Horizon's Unlimited"; William M. Bailey, International Paper Company, discussed "Industry's Effect on Forest Management"; and William C. Bramble, Department of Forestry and Conservation, Purdue University, explored "Forestry and Sociologic Changes in the 20th Century."

A special, and preliminary, event of the general session was the introduction by President Connaughton to the members of Ralph Sheldon Hosmer, surviving Charter Member of the Society. He was given a standing ovation.

Society Affairs

The annual business session of the Society, held on the afternoon of the 14th, included reports of officers, staff, and committees, followed by a special program on forestry education. All reports are published in the Society Affairs section of this issue of the JOURNAL.

Henry J. Malsberger, SAF vice president and chairman of the opening general session of the 60th annual meeting of the Society.

Division Meetings

Nine subject Divisions of the Society held technical sessions as follows: On November 15 the Division of Silviculture held an all-day meeting; the Divisions of Forest Products, Forest Recreation, and Economics and Policy met for half-day periods. The Division of Forest Management met all day on November 16, while the Divisions of Range Management, Education, and Watershed Management held half-day sessions. Matters dealing with Division business are reported in Society Affairs in this issue. All technical papers of the Division meetings will appear in the *Proceedings* of the 60th annual meeting, SAF.

Social Events and Awards

A social hour preceded the Society's annual dinner on the evening of November 16. Paul M. Dunn served as toastmaster. Two awards were presented by President Connaughton. Clyde S. Martin and Earle H. Clapp were honored by being awarded, respective-

Keynote speakers at the opening general session were (*left* to *right*) Richard E. McArdle, U. S. Forest Service; William M. Bailey, International Paper Company; and William C. Bramble, Purdue University.

ly, the Sir William Schlich memorial medal and the Gifford Pinchot medal. Dr. Howard A. Meyerhoff, director of the Scientific Manpower Commission, Washinngton, D. C., was banquet speaker. His subject: "Changing Concepts in Natural Resources." Entertainment was furnished by the Howard University choir. A dance followed the dinner.

A full program of ladies activities was conducted throughout the meeting under the direction of Mrs. George Jemison. It included specially arranged tours, a tea at the Embassy of the Federal Republic of Germany, and a luncheon at the Columbia Country Club.

Numerous alumni groups held get-togethers throughout the period of the meeting.

Thanks

The Society is indebted for a memorable 60th anniversary meeting to the many persons whose efforts made it possible. Committees for the meeting were under the direction of general chairman Arthur W. Greeley, program committee chairman John F. Shanklin, and H. R. Josephson, chairman, committee on arrangements.

Society of American Foresters Presents Two Awards at 60th Annual Meeting

Presentation of the
Sir William Schlich Memorial Medal to Clyde Sayers Martin
by Charles A. Connaughton, President
Society of American Foresters
Washington, D. C.
November 16, 1960

Although the name of Sir William Schlich is little known to the present generation of American foresters, he was probably the most influential forester in the English-speaking world during the latter part of the past century. Onetime inspector-general of forests to the Government of India, he was later professor of forestry at Oxford Universitv, and author of the monumental five-volume *Manual of Forestry*.

Sir William died in 1925. Shortly thereafter colleagues throughout the world contributed financially to establish a memorial commemorating his services to forestry. The Empire Forestry Association became keeper of the fund.

Proceeds from the fund were rotated annually to the nations that had contributed to it. When the first award was made to the United States in 1932, the Society of American Foresters was designated as its custodian. Out of the proceeds, the Council of the Society paid for the design and casting of a bronze medal, and named it the Sir William Schlich Memorial Medal to be bestowed by the Council in behalf of the Society for outstanding achievement in the advancement of forestry.

In appreciation by the forestry profession for his efforts to conserve the nation's natural resources, the Council made the first award to President Franklin D. Roosevelt, in 1935.

The second recipient was Gifford Pinchot, founder and first president of the Society, in 1940.

Subsequently, the medal was awarded biennially, to the following eminent American foresters.

Henry S. Graves in 1944.
William B. Greeley in 1946.
Herman H. Chapman in 1948.
Ralph S. Hosmer in 1950.
Elwood Wilson (posthumously) in 1952.
Tom Gill in 1954.
Samuel T. Dana in 1956.
And B Frank Heintzleman in 1958.

It is now my happy duty to make the eleventh presentation of this unique medal. The recipient is a distinguished forester, a past president and Fellow of the Society. Perhaps as much as any man he has been responsible for the successful alliance of our profession with the forest industries. The fact that industry is today the largest single employer of foresters is due in no small part to the influence and example of Clyde Sayers Martin.

Born September 19, 1884, in Waynesburg, Pa., Mr. Martin was graduated in 1905 from De Pauw University with the B.S. degree, and from Yale University School of Forestry in 1907 with the M.S. degree.

Immediately after leaving forestry school, he was employed by the Weyerhaeuser Timber Company in western Washington. He was in charge of forest management, and of surveys and the construction of logging roads. With increasing experience in the logging and engineering phases of the profession, he became one of the best informed foresters in the Pacific Northwest in the efficient organization of logging operations.

In 1920 he was called to British India as a consulting forest engineer to the Government of India. Three

years later he became chief forest engineer for the Government of Madras, organizing and training personnel and setting up sawmills and logging operations.

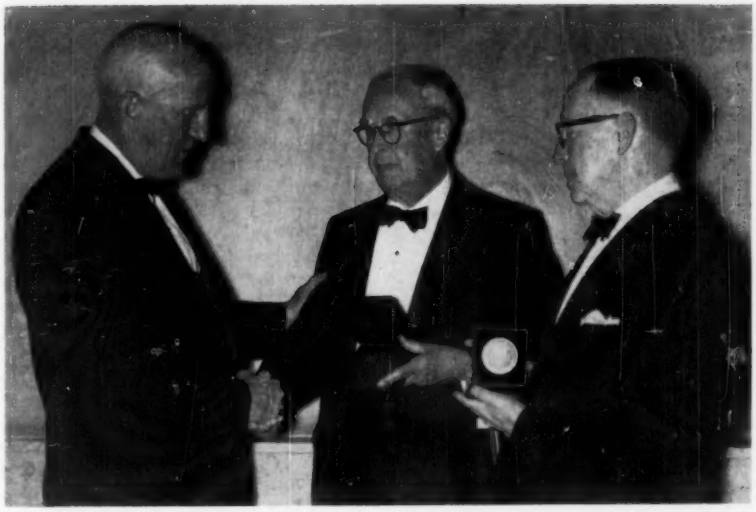
Returning to the United States in 1930 he was for several years part owner of an Oregon lumber company, then became chief forester for the Western Pine Association in 1934. Five years later Mr. Martin retutrned to Weyerhaeuser Timber Company as chief forester, at Tacoma, remaining with the company until his retirement.

The acceptance that forestry as a profession has won in industrial circles both here and abroad reflects the untiring efforts of foresters such as Mr. Martin. He served for years as an officer of the Western Forestry and Conservation Association, as a trustee of American Forest Products Industries, Inc., and on numerous industry committees.

In addition, he was chairman of both the Columbia River and Puget Sound Sections of the Society, vice president in 1946-1947, and president during 1948-1949. It is of more than passing significance that this was the first time in the history of the Society that a forester in industry was selected as its head. He was elected a Fellow of the Society in 1948.

It is probable that the United States has more professional foresters who are privately and industrially employed than all the other nations of the world added together. For this happy result a certain measure of credit is due the man whom we now honor.

Mr. Martin, in behalf of the Society of American Foresters which you have served so well, I present you with the Sir William Schlich Memorial Medal for distinguished service to forestry.



Earle H. Clapp (center) and Clyde S. Martin (right) are congratulated by SAF President Charles A. Connaughton upon receiving, respectively, the Gifford Pinchot medal and the Sir William Schlich memorial medal, awarded to them by the Society for their contributions to forestry.

Presentation of the

Gifford Pinchot Medal to Earle Hart Clapp

by Charles A. Connaughton, President
Society of American Foresters
Washington, D. C.
November 16, 1960

The Gifford Pinchot Medal is awarded periodically by the Society of American Foresters in recognition of outstanding service to forestry. This medal commemorates the great American forester who was the first president of our Society, the onetime chief of the U. S. Forest Service, and the foremost conservationist of his era.

The Gifford Pinchot Medal was first awarded in 1950 on occasion of our fiftieth anniversary. Since then it has been presented four times. The first award was to Henry S. Graves, an associate of Mr. Pinchot and past president of the Society, chief of the Forest Service, and dean of the Yale University School of Forestry. The second recipient was Raphael Zon, former editor of the JOURNAL OF FORESTRY, and for many years director of the Lake States Forest Experiment Station. The third presentation was to William L. Hall, a Charter Member, past president, and Fellow of the Society. Inman F. Eldredge, a former Councilman of the Society, Fellow, onetime director of the forest survey of the South, and forest consultant was the fourth recipient. And the fifth was our own Henry Clepper, executive secretary and Fellow.

And now I have the signal honor, heightened by a sense of personal pleasure, to make the sixth presentation of the Gifford Pinchot Medal in behalf of our Society. Were Mr. Pinchot with us tonight he would, I am sure, applaud and endorse the Council's selection, for no forester was held in higher esteem by Mr. Pinchot than his friend and colleague of many years —Earle Hart Clapp.

Distinguished forester, faithful public servant, imaginative organizer of research, zealous administrator—Dr. Clapp is the embodiment of those attributes that have earned for forestry an accepted place among the learned professions.

Born in North Rush, N. Y., October 15, 1877, Dr. Clapp was a student at Cornell University before taking the A.B. degree at the University of Michigan in 1905. In 1928 this University awarded him the degree doctor of science.

Entering the U. S. Forest Service in 1905, he was named chief of the Office of Forest Management three years later, and subsequently rose to the positions of associate district forester

Scene at the registration area in the Sheraton-Park Hotel, Washington, D. C., as the Society of American Foresters gathered for its 60th annual meeting.

(1909-1912), forest inspector (1912-1915), and assistant forester in charge of research 1915-1935. He was associate chief of the Forest Service during the period 1935-1944, and acting chief during 1940-1942. He retired in 1944.

This brief recital of positions held tells little of Dr. Clapp's contributions to the Forest Service and to American forestry. His contributions were many and varied. Perhaps most important, because of its continuing significance, is his accomplishment in organizing the forestry research program that resulted in the present nationwide system of ten regional forest experiment stations and the expansion of the Forest Products Laboratory.

Basic to this research program was the legislation that was essential to the development of research commensurate with national needs. Dr. Clapp planned and helped obtain this legislation, as he also planned and helped obtain legislation to advance other phases of forestry.

The imprint of his knowledge, vision, and personality is indelibly fixed on numerous far-reaching Forest Service reports. He is the author of *A National Program of Forest Research,* published in 1926. He supervised the monumental *A National Plan for American Forestry,* issued in two volumes in 1933; and *The Western Range,* subtitled *a Great but Neglected National Resource,* published in 1936. He is the author of additional articles published in the JOURNAL OF FORESTRY, and of numerous other government reports. It is perhaps prophetic of his subsequent career that his first published article in the JOURNAL OF FORESTRY (February 1917) was titled "The Correlation of American Forest Research."

Thus, it was not unexpected that in the fields of forestry research and forestry policy, Dr. Clapp has been one of the most influential government officials.

It would be a mistake to assume that Dr. Clapp's contributions began and ceased within the Forest Service. He gave generously of his time and talents to our Society. He was elected vice president in 1916, and twice again in 1934 and 1935. He served on committees too numerous to catalog. He was elected a Fellow in 1930.

Dr. Clapp, in behalf of the Council of the Society of American Foresters, I have the honor to present you with the Gifford Pinchot Medal for outstanding service to forestry. With it goes the esteem of your colleagues in the profession which you did so much to help establish.

President-elect Kennedy Congratulates SAF on 60th Anniversary

Editor's note.—The following telegram was read to assembled SAF members and guests at the annual dinner of the Society marking its 60th anniversary.

Message to

SOCIETY OF AMERICAN FORESTERS

November 16, 1960
Sheraton-Park Hotel
Washington, D. C.

I want to extend my wholehearted best wishes to you, the members of the Society of American Foresters, on the occasion of your 60th anniversary. By clearly exhibiting solid and steady growth throughout this century, your new profession has more than justified the hopes and aspirations of your founders.

Gifford Pinchot, America's first forester, has etched his name indelibly upon the conservation movement—a vital force in America today. It is well to remember that we are the benefactors of his vision in establishing the National Forests during his tenure as Chief Forester. Many of you here today who began your professional careers during the second great thrust in conservation under Franklin Delano Roosevelt's administration must have felt some of the same thrill of accomplishment of those who founded your profession.

This generation of foresters faces an even more challenging task in the years immediately ahead. No longer can we depend upon nature's storehouse of virgin timber; our forest growing programs—public and private—must be speeded if future generations will pay tribute to our foresight—not condemn us for the lack of it.

I fully intend that the decade of the sixties will witness a strong surge forward in the conservation of all of our renewable natural resources—forests, soils, waters and wildlife. The accomplishment of this important national effort will require the application of the highest skills and ideals of the forestry profession. It will require that our great conservation agencies rededicate themselves to harmonious working relationships if we are to obtain the "greatest good for the greatest number over the longest time."

In the months ahead, I shall look forward to developing programs with you to make these goals become a reality. Their successful execution will depend heavily upon the kind of foresighted and generous leadership which foresters again demonstrated at the World Forestry Congress several months ago.

America's goals—world leadership in the battle for freedom, the development of peaceful relations among all nations, accelerated economic and social progress at home—can only be met by an extra measure of moral fibre and hard work—not only to meet the challenge, but to win the battle. That you will give unstintingly of both I have no doubt.

JOHN F. KENNEDY

An Endowment Fund for the Society

Council's Column

During the five years I have been privileged to serve as a national officer and Council member of the Society of American Foresters, I have been repeatedly impressed, as have others before me, with our lack of resources for financing significant studies and other projects of importance to the profession and the Society. In recent years, the Society has been successful in obtaining financial support from private and public foundations for a few projects, notably the studies of research and of education in forestry, the natural areas survey in the Southeast, and the visiting scientists program. At the same time, a much larger number of distinctive and worthwhile projects have had to be seriously curtailed, deferred indefinitely, or passed up entirely for lack of funds to finance them.

Illustrative of the limitations placed on the Society in developing a more comprehensive program for advancing the profession of forestry is the following sample of projects considered by the Council in past years. In this connection, it should be noted that promising projects often never get beyond the discussion stage for the reason that, funds being unavailable, the Council realizes the futility of giving official sanction to the proposed undertaking.

The current study of Education in Forestry and Related Fields of Natural Resources Management is being financed chiefly with a grant from the Old Dominion Foundation. Start of this project, first proposed by the Council of Forestry School Executives in 1953, was delayed for six years and then undertaken with but half the amount deemed necessary for a complete study of the subject. Additionally, there is need for a continuing study of education, for which funds are not now available or in sight.

Following completion in 1955 of the Society's Forestry Research Project, which was supported by a $30,000 grant from the Rockefeller Foundation and resulted in the book *Forestry and Related Research in North America* by Kaufert and Cummings, the Council approved a proposal for a national conference on research to which Canadian and Mexican representatives would be invited. The purpose of the conference would be to formulate ways and means of effectuating urgently needed research expansion. Funds for such an undertaking, estimated at $4,000 to $5,000 have not been available.

At the Council meeting in December 1948, Henry Clepper reported on the completion of the Society's "state forestry surveys" project in support of which the Charles Lathrop Pack Forestry Foundation had contributed $35,000. He further reported that the Association of State Foresters, at its meeting in June 1947, had proposed that the Society make a national study of state forestry. W. B. Greeley supported the proposal as desirable to produce a "master plan" for state forestry. The estimated cost of the project was $25,000. Funds were never forthcoming.

Following the national conference of UNESCO held in Philadelphia in March 1947, delegates Tom Gill and V. L. Harper proposed to the Council that *inter alia* it consider the advisability of the SAF taking leadership in creating an international society of foresters. A grant to finance the proposal was not obtained.

Beginning as early as 1937 in the New York Section, proposals have been made from time to time that the Council authorize a comprehensive study of state licensing and registration of foresters with a view toward determining the need for registration and the desirability of drafting a model bill. All aspects of state registration would have been studied, including the experiences of other professional groups. As the demand for such information has grown, the project has had to be undertaken by a committee, working gratuitously for lack of Society funds.

Other projects might be cited which have withered on the vine for lack of financial support, but the foregoing will serve to indicate the nature and variety of studies the Society could undertake to advantage in advancing the profession of forestry.

In appreciation of the obvious value of a substantial financial reserve to meet such needs as these, a Council committee (D E. Clark, M. K. Goddard, and G. A. Garratt) was appointed in 1958 to investigate the desirability of building up a permanent endowment fund for the Society, the income from which would be available for specific research projects and other special studies and for promoting the general welfare and advancement of the profession, the Society, and its subject Divisions. The favorable recommendation of this three-man committee was subsequently endorsed by the entire SAF Council, which authorized the creation of an Endowment Fund Committee under the chairmanship of the author of this column and with its members selected from the ranks of the past presidents of the Society.

The first meeting of the Committee, held in Seattle at the time of the Fifth World Forestry Congress, was attended by President Charles A. Connaughton, by past Presidents E. L. Demmon, George L. Drake, DeWitt Nelson, Henry Schmitz, George A. Garratt, and by Executive Secretary Henry Clepper. The Committee authorized a solicitation of Society members as the first step in a fund-raising drive. It also decided that the figure of $250,000 should be set as the initial goal for our fund-raising program over the next several years. No income from the Endowment Fund would be used to meet the normal expenses of the Society.

The expected favorable response to this appeal will put the Society in a stronger position to seek financial support from other sources, both individual and corporate, in a later stage of the campaign. Your attention is directed to the tax-exempt status of the Society, whereby contributions to the endowment fund are deductible for income tax purposes.

On behalf of the Endowment Fund Committee and the Council I urge you to support the SAF Endowment Fund campaign and share in the development of a more effective Society program.

GEORGE A. GARRATT

Timber Depletion—Federal Income Tax

Nelson T. Samson[1]

THE federal income tax is part of the economics of doing business in a forest enterprise. While the payment of income taxes is an inescapable part of our economic system, its pressure can be moderated or lightened by an understanding and working knowledge of our internal revenue laws. The continued increase in the value of forest products and the constantly growing need for federal moneys will continue to be our dominant source of federal revenue. Management decisions and policy determinations in the future will have to be implemented, even more carefully than in the past, wth an eye to their tax consequences. The continuation, expansion or curtailment of many of our basic forestry procedures will depend upon the tax treatment afforded the wood-using industries.

The Internal Revenue Code of 1954, with some later revisions, is the governing code now in effect. Under it, owners and operators of timber are subject to the same rules and regulations as any other individuals or companies with several very important provisions specifically applicable to timber enterprises. These provisions or sections, have been added to the Code for various reasons: (1) forest crops, while a renewable resource, require a long period of high risk before a realization of profit can be obtained from the endeavor; (2) it has been deemed in the public interest to encourage and promote good conservation practices on the forest lands of the United States; (3) it has been thought necessary to provide timber owners *who cut their own timber* or who sell it under a cutting contract, equality of treatment with timber owners who liquidate their holdings outright under Section 1221 and thus get capital gains treatment.

The provisions which are equally applicable to all individuals and companies need not be considered in this paper since any competent attorney will have a working knowledge of them. The provisions which are specifically applicable to timber interests should be considered under two general headings: timber depletion and the capital gains treatment of income. Only timber depletion will be considered in this article.

Timber Depletion

Minerals, oil and gas, other natural deposits (including soil in place), and timber are known as wasting assets.[2] Whenever any of them is removed from its natural position or native state, the original amount is reduced by just that amount. This gradual diminution of the original quantity is known as "depletion" . . . (*11*).

The allowance of a deduction from taxable income for timber depletion is made so that the cost of a stand plus the proper capitalized charges may be recovered taxfree as the stand is removed.[3] Congress has never given timber the discovery value or percentage depletion that it affords to gas, oil, or other minerals.[4] This probably stems from the fact that timber discovery is neither dangerous nor difficult and therefore no special subsidy is necessary to stimulate the search for it.

Turpentine Depletion

If timber contains turpnetine, that portion of the total cost or other basis reasonably allocable to turpentine, taking into consideration the difference in value between round and turpentined timber, may be amortized or recovered through depletion deductions on any reasonable basis over the period of the actual turpentining (*5*).

Who Is Entitled to Depletion

Any person who has an economic interest in standing timber is entitled to claim depletion on timber cut and sold during a taxable period. "An economic interest is possessed in every case in which the taxpayer has acquired, by investment, any interest in minerals in place or standing timber and secures, by any form of legal relationship income derived from the severance and sale of the minerals or timber, to which he must look for a return of his capital."[5] The timber owner, a lessee or holder of a cutting contract, the owner of a timber royalty, and the owner of a right to receive a fixed payment solely out of the proceeds from the cutting of timber, have economic interests and are entitled to claim depletion. Even though a taxpayer may not have an actual investment in standing timber, he may acquire an economic interest therein by an investment in camps, logging roads, etc., made pursuant to a right to cut, process and sell the timber products (*1*). A deduction may be made to more than one taxpayer where the owner has transferred a part of his economic interest in standing timber to another or

THE AUTHOR is associcate professor of forestry, Stephen F. Austin State College, Nacogdoches, Texas.

[1]Appreciation is expressed to Meade Whitaker, Cabaniss & Johnston, Birmingham, Ala., and to William Sanders, Forest Industries Committee on Timber Valuation and Taxation, Washington, D. C., for many helpful suggestions and comments during the preparation of this paper. Any errors or inconsistencies are the responsibility of the author alone.

[2]Rev. Rul. 78, 1953-1 CB 18.
[3]Rev. Rul. 78, 1953-1 CB 18.
[4]I.R.C. 1954, Sec. 613 (a)-(b).
[5]I.R.C. 1954, Sec. 1.611.

where the owner is a trust or a partnership. The law provides for apportionment of the deduction between lessor and lessee and between trustee and beneficiary (*11*). However, where a person is merely employed to cut timber for others, and does not have the right to sell or use the timber in his trade or business, such a person does not have an economic interest despite the fact that he might get paid out of the proceeds of production.[6] This is a point which merits considerable attention. Care must be taken to be sure that the contract is actually a Section 631(b) cutting contract and not merely a situation where the contract logger is an employee of the owner. To have an economic interest in a piece of standing timber, the holder of the contract right to cut must have an unrestricted right to sell the logs for his own account or to use them in his trade or business. Revenue Ruling 58-295 states, "If the circumstances are such that the grantor in fact takes for his own use or for sale on his own account substantially all of the logs cut, whether or not in the exercise of an option to purchase, the taxpayer-grantee will not be deemed to have an unrestricted right to sell the logs or to use them in his trade or business." Another point to consider is that the assumption by the taxpayer-grantee of some of the economic risks does not necessarily assure him retention of an economic interest.

When Does Depletion Take Place

Depletion of timber takes place at the time the timber is cut. However, to facilitate the determination of the amount of the depletion deduction, the Internal Revenue Service allows it to be computed at the point when, in the process of exploitation the quantity of cut timber is first actually determined.[7] While depletion of the timber takes place at the time the timber is cut, the deduction of the allowance is permitted only in the year the timber or the products produced from it are sold. This is accomplished by requiring that the amount of depletion "shall be charged to a depletion account which shall be credited as the timber, with respect to which the charge is made, is sold."[8] A practical compliance with the requirement is effected where the amount of depletion is charged into an apropriate inventory account which is relieved when the timber or products produced from the timber are sold (*1*).

How the Depletion Allowance is Determined

Depletion Allowance = Unit depletion × number of units cut or sold during the year.

Unit Depletion = Adjusted Basis for Depletion ÷ Total Volume of Merchantable timber.

Adjusted Basis for Depletion = Basis for Depletion corrected for additions or subtractions to the base.

Basis for Depletion = "Cost" in the real sense of the word.[9]

Basis for Depletion

The following items are included in the original base:

The consideration paid for the timber on the tract
Lawyer's fees
The cost of title search
Surveying costs
Cruising costs
Commissions

The consideration paid for the tract depends upon how and when it was acquired.[10]

Revaluation of Basis

No revaluation of timber property whose value as of any specific date has been determined and approved by the Internal Revenue Service will be allowed to the same owner, unless there has been misrepresentation, fraud, or gross error as to the original estimate.[11] Revaluation for any of these reasons can be made only with the consent of the Commissioner of Internal Revenue. The Commissioner cannot reassess the original estimate after it has been accepted, except for the reasons stated.[12]

Allocation of Basis

The costs of the acquisition must be allocated between the land, the standing timber, and any other elements of value present, such as mineral rights, in proportion to the relative value of each at the date of acquisition (*8*). Since the taxpayer is not entitled to claim depletion on the value of the land itself, or on physical improvements standing on the land, he must, for tax purposes, apportion the value of the property between the land, the timber, and the improvements.[13]

It is perhaps pertinent to mention here the Forestry Depletion plan suggested by E. T. F. Wohlenberg in 1940 (*18*). The plan provides for the allocation of the remaining adjusted basis for depletion according to the value of the timber on the tract as of the date of adoption. The values to be applied to the timber shall be their relative values as of the date of acquisition. The allocation may be by species, size, or quality of timber, as long as adequate timber accounts are maintained.

The theory behind this plan is that since most of the capital investment in a tract of timber is tied up in the valuable species, the amount of depletion allowance claimed for any period should be in proportion to the amount of value removed during that period. This has the desirable faculty of allowing the bulk of an investment to be recovered rapidly as the valuable timber is removed, while the remaining low value timber ties up only a small amount of investment capital. This plan is considered particularly applicable in stands cut selectively, where the most valuable species are logged first, while the smaller, low-value trees are left for a later cut. It could conceivably stimulate the practice of forestry by removing the temptation for the operator to clearcut the timber in order to recover all of his initial investment. He might be more prone

[6]Helga Carlen, 220 F (2d) 338, Affg. 20 TC 573.

[7]Prop. Regs. 1954, Sec. 1.611-3 (b)(1).

[8]Prop. Regs. 1954, Sec. 1.611-3 (b)(2).

[9]Prop. Regs. 1954, 1.611-1 (a).

[10]For the determination of the consideration paid for the tract see: I.R.C. 1954, Sections 362(a)2, 1012, 1014, 2032, 1.611. See also Treasury Department, Your Federal Income Tax. Internal Revenue Service Publication No. 17, 1959.

[11]Prop. Regs. 1954, Sec. 1.611-3 (g).

[12]Boyne City Lumber Company, 1930 CCh 9590, 47 F. (2d) 772.

[13]I.R.C. 1954, Sec. 1.611-3 (d)(2).

to gamble on the vagaries of growth and fire when the investment remaining in the timber is comparatively low. The plan also has the advantage of making money available for reinvestment in a shorter period of time than under a straight-line depletion system. The greatly diluted depletion allowance in later years may have a pronounced effect upon the tax paid in those years. In a period of rising prices and rising tax rates, it would raise the total tax paid on the timber. Bookkeeping costs will, of necessity, be higher than for a regular per unit removed cost depletion.

Timber Accounts

In order to obtain a reasonable treatment of depletion, a taxpayer must include his timber in one or more timber accounts. The proposed regulations under the 1954 Code provide as follows:

> With a view to logical and reasonable valuation of timber, the taxpayer shall include his timber in one or more accounts. In general, each such account shall include all the taxpayer's timber which is located in one "block." A block may be an operation unit which includes all the taxpayer's timber which would logically go to a single given point of manufacture. In those cases in which the point of manufacture is at a considerable distance, or in which the logs or other products will probably be sold in a log or other market, the block may be a logging unit which includes all the taxpayer's timber which would logically be removed by a single logging development. Blocks may also be established by geographical or political boundaries or by logical management areas. *Timber acquired under cutting contracts* shall be carried in separate accounts and shall not constitute part of any block.

Established blocks may be adjusted as set forth in the regulations, "For good and substantial reasons satisfactory to the Commissioner, or as required by the land accounts may be readjusted by dividing individual accounts, by combining two or more accounts, or by dividing and recombining accounts." It is not necessary to obtain permission in advance from the Commissioner to readjust blocks.

Adjusted Basis for Depletion

The adjusted basis for depletion, as the name implies, is the basis for depletion adjusted either upward or downward to provide for additions to or subtractions from the basis for depletion.[14]

Additions to the basis for depletion may result from:

The acquisition of additional timber tracts.

The capitalization of expenditures.

The growth of some immature timber (having some previously allocated basis) into the merchantable range.

Subtractions from the basis for depletion may result from:

The selling or cutting of timber.

The loss of timber due to fire, windstorm or other casualty.

The loss of timber due to involuntary conversion.

Depletion previously sustained.

Tax Treatment of Expenditures

The tax treatment of expenditures is of constant concern to foresters and others dealing with forest activities. Certain expenditures must be capitalized, others expensed, and a third group may be either capitalized or expensed at the option of the taxpayer. In most cases, though not always, it is to the tax benefit of a taxpayer to expense an item of cost.

The general distinction between an expense and a capital investment is the same in the operation of timberlands as it is in any other business. Items having a useful life in excess of one year are considered as capital assets and must be carried in a capital account to be recovered through depreciation or depletion. Those items of cost having a useful life of less than one year are considered as expenses and are deductible as such in the year they are incurred. In actual practice the distinction is not so clear-cut.

Expenditures for capital assets must be divided between those for depreciable property and those which must be added to the basis to be recovered through the depletion allowance. For example, the consideration paid for timberland must be allocated between land and improvements on the land which are nondepletable items and timber which is depletable. Costs incurred in connection with the acquisition of timberlands such as the cost of title search, lawyers fees, commissions, survey costs and cruise costs, must be capitalized and form part of the basis for depletion. While the regulations seem to indicate that the items making up the basis for depletion should be allocated between the land and the timber on the same basis as the purchase price, Whitaker (*16*) sees no reason why collateral costs, such as timber cruising, which benefit or are referable solely to the standing timber, cannot properly be added to the timber cost rather than allocated, the result being an increase in the depletion basis. This appears to be logical reasoning.

Survey and cruise costs, where held to be a regular year-in-year-out practice not connected with a specific sale or acquisition, are considered as expenses (*2*). Survey costs incurred to prevent loss of title by adverse possession have been ruled as necessary expenses of protecting the property and may be so treated.[15]

Direct costs of planting, including site preparation, cost of seed or seedlings, labor and tool expense including depreciation of equipment used in planting must be capitalized and recovered through depletion as the timber becomes merchantable and is cut or sold.[16]

In the case of a long-term lease involving future growth, the Internal Revenue Service contends that all payments by the lessee in respect of the lease must be capitalized and added to the cost of the timber. This includes rent, ad valorem taxes, fire protection assessments and other payments made on behalf of the landowner (*4*).

Roads and railroads are not depletable assets and their cost must be carried in the "land account." Depending upon their "permanence," they may or may

[14] I.R.C. 1954, Sec. 1016.

[15] Brier Hill Collieries, 12 BTA 500 (1928), rev'd in part, 50 F2d 777 (6th Cir. 1931).

[16] Rev. Rul. 55-252, 1955-1 Cum. Bull. 319.

not be subject to depreciation. In the western regions, where railroads costs are an important part of log costs, the general practice is to capitalize and amortize the cost of mainline sections, and to expense the cost of spur lines in the year they are built (*13*).

Under Section 266 of the 1955 Internal Revenue Code, carrying charges and development expenses may be expensed or capitalized at the option of the taxpayer. These are charges which are incurred during the period when the stands are being built up to merchantable size. It should be noted that while certain expense items may be capitalized, those which are by nature capital costs may not be expensed. Annual property taxes assessed before the property has reached merchantable size may be capitalized or expensed. Those assessed on an income-producing property must be expensed. Taxes such as assessments which raise the value of the property may be capitalized, but may not be expensed. Protection costs (insect, disease, or fire), contributions to fire protection associations, fire insurance premiums, and service charges on a performance bond in lieu of a cash deposit receive the optional treatment. Treatments in immature stands such as thinning, girdling, poisoning or pruning likewise may be expensed or capitalized at the taxpayer's option.

Interest actually paid for the years prior to 1917 on borrowed money invested in the property,[17] interest paid during the period of January 1, 1924 to August 6, 1931, if the property qualified as "unproductive," and for the period August 6, 1931 to December 31, 1941, if the property qualified as "unimproved and unproductive real property," as well as interest on money borrowed to satisfy a state law to guarantee natural reforestation may be either expensed or capitalized.

Operating expenses, those necessary to maintain the investment, expendable supplies, maintenance costs for roads, ditches, and grades used in fire protection, and blazing or painting of boundary lines when it is a year-in-year-out operation subsequent to acquisition must be expensed.

[17]SM 5033, CB U-1, p. 9 explained in IT 2386, CB U-1-2, p. 110.

Allocation to Immature Timber

The cost allocation to timber normally assumes allocation to the merchantable timber, but the cost of carrying immature timber should not reasonably be loaded on to the depletion rate of a relatively small amount of presently available cut. Olson (*10*) stated that if any allocation of value to smaller diameter classes was followed in the appraisal or development of the original purchase price, that allocation must be followed for taxation purposes; only if there is no market value and no consideration paid for smaller sizes, could they be ignored in accounting for the timber. The share of the cost allocated to the immature timber should be kept aside and when, through the accumulation of growth, the immature trees reach merchantable size its cost should be added to the adjusted basis for depletion and its volume added to the total merchantable volume remaining on the tract.

Losses from Casualty, Theft, and Involuntary Conversion

A casualty loss is an identifiable event of a "sudden, unexpected, or unusual nature,"[18] as contrasted with a "progressive deterioration of property through a steadily operating cause."[19]

Types of losses which may be deducted as casualty losses include, but are not limited to: those caused by natural physical forces or "acts of God," such as lightning, windstorm, ice, hail, sleet, unusually heavy rains, flood, freezing, drought, and, if of epidemic nature, insect infestation or plant disease. Others are man-caused, such as those resulting from fire or plane crash or from war (*17*).

There seems to be an element of uncertainty as to how to determine the amount of casualty losses. The method used by the Internal Revenue Service is as follows: (*11*)

[18]Matheson and Wood, Exs. V. Comm., 54 F2d S37, 10 AFTR 945.

[19]Fay V. Comm., 120 F.2d 253, 27 AFTR 342. See Rev. Bul. 79, 1953-1 CB 41.

If the entire property is destroyed, the loss is the adjusted basis for determining loss upon a sale.[20] If part of the property is destroyed, and the remaining property is not discarded, the following formula is used:[21]

$$\frac{\text{Adjusted Basis} \times \text{Actual value before, less actual value after loss}}{\text{Actual value before loss}} = \text{deduction}$$

Olson (*9*) reports a U. S. Circuit Court decision in Alcoma Association Incorporated, where the court held that a loss could be claimed to the extent of the difference between the value of the asset before and after the loss, not to exceed the cost basis.

Fiske (*6*) reports two cases where the casualty loss allowed was equal to cost depletion applicable to the timber destroyed.[22] Olson (*9*) comments on what seems to be an unusual method of determining loss. "Abnormal loss of planting costs due to failure to survive are deductible losses. They can be easily determined on an acre basis. A certain mortality percentage is expected. Only the excess over that normal is deductible." The source for this interpretation is not given.

Theft is handled in the same manner as a casualty loss. The deductions for theft are allowed only in the year during which the theft occurred (*17*). The courts, however, in certain instances have allowed deductions in the year the theft was discovered.

When all of the federal and state highway construction projects and large and small dam programs are considered, it becomes increasingly evident that involuntary conversions are destined to play a more prominent role in the activities of the forest industries. Awards for involuntary conversion go toward reducing the basis for depletion. There are certain tax benefits to be gained by a clear understanding of the provisions of the income tax law dealing with this matter. I.R.C. 1954, Section 1033 (a)-1 defines involuntary conversion as follows:

[20]I.R.C. 1954, Sec 165(b).

[21]Frazer, 10, BTA 409.

[22]Pioneer Cooperage Company v. Comm., 53 F.2d 43; Oregon Mesabi Corporation, 39 BTA 1033.

An "involuntary conversion" may be the result of the destruction of property in whole or in part, the theft of property, the seizure of property, the requisition or condemnation of property. An "involuntary conversion" may be a conversion into similar property or into money or into dissimilar property.

The legal points involved, when dealing with this type of event, are so complicated and numerous that any attempt to list them here would be foolhardy. The reader is referred to an excellent article by Reinhold Groh entitled "Involuntary Conversions and Casualty Lossess" in the August 1957 issue of *Taxes* magazine.

Unit Depletion

$$\text{Unit depletion} = \frac{\text{Adjusted basis for depletion}}{\text{Total volume merchantable timber}}$$

Adjusted basis for depletion has been discussed above.

Total Volume Merchantable Timber

Changes in the total amount of merchantable timber may result from a number of causes. These changes must be given consideration in determining the unit depletion. When these changes become known, it is mandatory to revise the volume estimate to correctly express the current situation. The proposed regulations under the 1954 Code have added that such revisions shall be made as of the close of the year in which the timber volume increase or decrease becomes known (*9*). While the Code provides for adjustment of the estimated recoverable units in computing depletion for the year during which the correction is ascertained and for all subsequent taxable years, the courts have held that the adjustment can be applied to *all open years* in which the taxpayer knew or should have known of the error in the prior estimates.[23]

[23]The Commissioner may change the depletion allowance by changing the total volume of merchantable timber remaining. By so doing, he may adjust the taxpayer's returns for prior years by reducing the depletion allowance claimed and, thereby, increasing his tax liability. See Marion A. Burt Beck, 15 T. C. 642 (1950), aff'd 194 F.2d 537 (end Cir. 1952), and Alber (*1*).

Timber Cut or Sold

The amount of timber cut or sold during the taxable year must be deducted from the total volume for subsequent years.

Accumulation of Growth

Growth has become an important factor in unit depletion calculations. As growing stock increases and more intensive forestry is practiced, growth will become more of a factor, and will tend to dilute the unit depletion rate until under certain circumstances it might conceivably almost eliminate it. Growth adjustments are of two kinds: growth added to already existing merchantable timber, and growth added to immature timber which causes ingrowth into merchantable classes. Both types of growth should be added to the remaining depletable timber volume every five years at a minimum, and preferably every year. Fiske (*6*) estimated that growth in Texas amounts to about 5 percent a year for pine and 2½ percent a year for hardwood.

Change in Utilization Standards

With the growing scarcity of certain types of timber, the rise in stumpage prices, the establishment of better and more widespread transportation facilities, the introduction of new products, and the creation of larger, better developed markets, various species have become economically merchantable which were not considered merchantable at the time of the original cruise. Under these circumstances, the estimate of remaining depletable timber, under the new standards of utilization, would have to be used in determining unit depletion.

Change in Log Rule

Variations in the character of timber acquired in recent years, as well as changing utilization standards and marketing techniques, may dictate a switch in log rules or scale rules. When this occurs it is essential that consistency be maintained between scale and cruise data. Converting factors from one log rule to another must be reasonably accurate as to species, location, and tree size.

Gradual Timber Loss Over Many Years

If insect or drought losses are spread over several years, the loss would be nondeductible as a casualty loss, but the taxpayer would have the right to reduce his timber volume, thus increasing the depletion rate.

Depletion Allowance

The depletion allowance for a taxable year is determined by multiplying the unit depletion by the number of units cut or sold during the year.[24]

Forest Industries Schedule (Form T—Timber)

"This schedule should be filled in and filed with the income-tax returns by each taxpayer who has cut standing timber, owned, leased, or under contract by him, or who has acquired standing timber by purchase, lease, or otherwise, or who has relinquished standing timber by sale, lease, or otherwise, or who has sold cutover forest land during the taxable years or who has elected in its income-tax returns to claim gain or loss from the cutting of his timber in accordance with Section 117 (k) (1) (Section 631a, 1954 Code) as added to the Internal Revenue Code by section 127 of the Revenue Act of 1943"[25] While this form may be required of all persons claiming a depletion allowance on timber, it will not ordinarily be required of owners with small holdings (*17*).

In calculating the basis for depletion, the main item is usually the consideration paid for the timber and this item requires familiarity with fair market value determination.

Fair Market Value

In order to determine gain or loss on timber transactions or to establish the basis for depletion, it is often necessary to find the fair market value of the timber. While fair market value is a fact, and not a legal principle, it is also a matter of opinion and judgment. The

[24]I.R.C. 1954, Sec. 1.611-3 (b)(2).

[25]Internal Revenue Service. Forest Industries Schedule. Form T (Timber). Rev. Feb. 1954.

valuation of timber stumpage is governed by the same principles that are involved in the valuation of any other properties. An unusually complete test of fair market value has been stated as follows:

> Value for tax purposes is in general terms considered to be the amount which a willing seller and a willing and able buyer, both familiar with the situation, reasonable in their views, acting for their own interests, and each willing to make such adjustments in his views upon value as might be necessary to bring about a sale at a reasonable amount fair to both parties, would pay and accept. Such a willing seller and buyer need not actually exist, their existence being ordinarily postulated. (*8*).

There is no simple, definite method for determining fair market value. Any method may be used which arrives at a reasonable valuation and which can be substantiated to the satisfaction of the Commissioner. Bona fide sales and transactions, at arms length, of similar property, at or near the critical date, will outweigh any other consideration. Unusually high or low sales are normally disregarded as unrepresentative of market value.[26] In the event that there are no sales or transactions close to the timber to be evaluated, it is possible to use sales or transactions of the closest timber and adjust the values for differences between the tracts.

Bona fide offers to purchase or sell similar standing timber, values fixed for local taxation, probate records, disinterested appraisals made by competent forest engineers, and valuations made for other purposes (gift or inheritance) are all acceptable methods of arriving at the fair market value. Sometimes, it is necessary to use the "back-to-the-stump" method. The value received for the logs at the market place is reduced by the amount of the costs of logging, the transportation charges, and a reasonable amount set up for logging profit. While this system has some merit where other possibilities are weak or doubtful, it is often used for testing values reached by other means. Shatley (*12*) mentions two other methods of arriving at the fair market value which are in use on the West Coast. One is based upon a percentage of the market value of the logs, while the other is based upon a percentage of a lumber price index. Both seem to have application in limited areas.[27]

Regardless of the method of arriving at a fair market value, it is always necessary to adjust the values obtained from other sources to the particular tract for which valuation is being sought. The factors to be considered in such an adjustment are:[28]

Character and quality of timber
Quantity of timber per acre
Total quantity under consideration
Location of the timber
Accessibility to exploitation
Probable cost of exploitation
State of industrial development of the locality
Freight rates to important markets

The timber in each particular case will be valued on its own merits and not on the basis of general averages for regions; however, the value placed upon it, taking into consideration such factors as those mentioned above, will be consistent with that of the other timber in the region. The comment by Steer[29] in regard to stumpage prices is interesting in light of the above.

It must be borne in mind, that fair market value under Sec. 631a is not the value of the entire tract of timber owned, but only that part represented by the timber cut during the taxable year.

With respect to the determination of the fair market values, such valuation will usually be at "Retail Value," that is, the market value per unit of a small tract of timber disposed of for liquidation in the immediate future instead of "Wholesale Value" which is construed as the market value per unit of a large block of timber held for liquidation over a long period of years (*7*).

In relating the cost of government stumpage to your own particular tract, the extra government requirements imposed on the logging operation, such as KV payments for stand improvement and perhaps a co-op deposit for slash disposal or fire protection, must be compared with the logging requirements on your own land to arrive at a realistic value for cost. Where these items represent an added charge to the nominal stumpage price, and do not benefit the buyer in any way, they should be given consideration when determining fair market value (*14*).

It is highly important that the data used in arriving at values be maintained as a permanent part of the taxpayer's records because the controversies with respect to values do not occur until two or three years, or more, after the basic valuation date. It should also be borne in mind that the burden of proof shall be on the petitioner except as otherwise provided by statute in cases before the Tax Court.[30]

Literature Cited

1. ALBER, HAROLD E. 1957. Timber depletion for income tax purposes. The Arthur Young Journal. p. 1-6.
2. BOWEN, CLARK E. 1955. Federal timber taxes under the new code. Taxes. p. 824 et seq.
3. BRIGGS, CHARLES W. 1952. Tax treatment of timber cutting under section 117 (k), the Internal Revenue Code. Forest Industries Committee on Timber Valuation and Taxation. p. 29.
4. ————. 1959. The timber owner and his tax expert plan to ensure

[26]Cascade Lumber, D. C., Washington June 17, 1957. The experts for the taxpayer estimated values twice as high as those for the government. The court sustained the taxpayer. Its estimates were based on sales of property like its own, which happened to be the highest valued sales in the area.

[27]For other sources of fair market value it is suggested that I.R.C., 1954, Sec. 1.611 be consulted. An excellent coverage of this subject is to be found in Briggs (*3*).

[28]I.R.C. 1954, Sec. 1.611-3 (f).

[29]"Commercial stumpage value has been defined as the value fixed by the current market price. This is fallacious. No definite ruling of current stumpage value can be established for standing timber because of the greatly diversified physical conditions affecting its exploitation and the great variation in the intrinsic value of the different species. It frequently happens that a current market price is established by timber buyers for a species in a given region which is not determined by the realization value and has no relation thereto. . . Actual prices have been determined by economic conditions and by opinions of the parties to the transaction. That this 'by-guess and by-God' method of price determination has been as common as well as fallacious is well known. . . It is not possible to determine accurately the realization stumpage value of standing timber until after it has been logged and milled and the lumber or other products sold" (*15*).

[30]Rules of practice before the tax court of the United States. Rule 32.

capital gains. Journal of Taxation. pp. 236-240.
5. BUREAU OF INTERNAL REVENUE. Dec. 28, 1949. Turpentine depletion. Income Tax Information Release 1.
6. FISKE, LELAND E. 1958. Tax accounting for timber to get best tax treatment. Journal of Taxation Vol. 8, pp. 148-150.
7. HOFFAR, A. M. 1944. Special tax relief for timber owners and operators. The Arthur Anderson Chronical Vol. 4, p. 214 et seq.
8. MERTENS, JACOB. 1958. Law of federal income taxation. Callaghan and Co., Chicago, Ill.
9. OLSON, PAUL. 1957. Income taxes in relation to operating costs. Yale Industrial Forestry Seminar. p. 130.
10. ———. 1958. Income taxes in relation to operating costs. Yale Industrial Forestry Seminar. p. 3 et seq.
11. PRENTICE-HALL. 1958. Federal tax course. Prentice-Hall Inc., Englewood Cliffs, N. J.
12. SHATLEY, C. W. 1953. Capital gain under section 117 (k) (4) of the code. Taxes pp 38-45.
13. SIMPSON, ROBERT M. Sept. 1957. Accounting problems of the forest-products industry. The Journal of Accountancy. p. 38-45.
14. STAEBNER, RALPH C. Nov. 1955. Income taxes in relation to operating costs. Yale Industrial Forestry Seminar.
15. STEER, H. B. 1938. Stumpage prices of privately owned timber in the U. S. U. S. Dept. Agric. Technical Bull. 626. p. 16.
16. WHITAKER, MEADE. 1957. Timber industry tax problems. Proceedings 6th Annual Tulane Tax Institute. p. 104-106.
17. WILLIAMS, ELLIS T. 1953. The small timber owner and his federal income tax. U. S. Dept. Agric. Agriculture Handbook 52.
18. WOHLENBERG, E. T. F. 1940. Forest depletion, federal tax allowance for selective logging. Jour. Forestry 38:113-118.

Western Redcedar Poles from British Columbia

I. V. Anderson

THE Society of American Foresters published a paper in the 1947 *Proceedings* called "Trends in the Utilization of Pole Species and Their Effect on Forest Management." This article told what pole species had been depleted and what forest areas and types of the United States must be developed to meet an ever increasing pole requirement. It also related the impact to that date of pole utilization on forest cutting practices. Since western redcedar (*Thuja plicata*) was still one of the principal pole species, many references were made to it. It was pointed out that western redcedar pole production in the United States had dropped from a high of 1.4 million poles in 1926 to 400,000 in 1947. Furthermore, it was stated this production level would drop to 200,000 poles annually during the next 20 years. After that, production would gradually increase as second growth stands came into production. Subsequent years have proven this forecast correct. However, the impact of the cedar pole forests of interior British Columbia were overlooked. Since 1947 United States pole companies have increased their operations in interior British Columbia. They are currently maintaining an annual production of approximately 400,000 poles. This could be increased by stepping up Canadian operations if market conditions would permit.

Back in 1947, the best information (*1*) available indicated approximately 10 million western redcedar poles in the forests of British Columbia. Since then, provincial foresters have completed the "Continuous Forest Inventory of British Columbia" (*2*). It disclosed that there are at present approximately 121 million cedar poles in the forests of British Columbia. Foresters have always believed it safer to underestimate than to overestimate. Such ultra-conservative timber estimates are not without precedent. Scientifically administered forest surveys of the U. S. Forest Service started 25 years ago have revealed timber volumes substantially in excess of earlier estimates.

There follows some pertinent facts regarding the western redcedar forests of British Columbia using the "Continuous Forest Inventory of British Columbia" as a basis.

TABLE 1.—INVENTORY OF CEDAR POLE STUMPAGE IN BRITISH COLUMBIA. TOTAL AVERAGE ANNUAL CUT AND EXPORT TO UNITED STATES BY FOREST DISTRICTS

Forest district	Number of[1] cedar poles 25′ & longer	Average annual cut[3] 1954-1958	
		Number exported to United States	Total number cut
	Thousands	*Thousands*	*Thousands*
Coast Area			
Vancouver	68,100	64	123
Prince Rupert	3,400	negligible	2
Total—coast	71,500	64	125
Interior			
Prince Rupert[2]	28,400	44	72
Prince George	2,020	2	8
Kamloops	6,880	44	116
Nelson	12,280	48	79
Total—interior	49,580	138	275
Grand total—B.C.	121,080	202	400

[1]Based on recent inventory "Continuous Forest Inventory of British Columbia."
[2]Geographically in both coast and interior areas.
[3]All poles produced average 40 feet long. Exported poles are longer than average and were estimated to average 45 feet long.

THE AUTHOR is a forestry consultant, Spokane, Wash.

The Forest

About one-half of the range of western redcedar is located in British Columbia. There its principal associate is western hemlock over its entire range. In the interior of the province including the Nelson, Kamloops, and Prince George[1] districts, its other associates are Douglas-fir, Engelmann spruce, white spruce, western white pine, western larch, subalpine fir, and grand fir. In the coastal areas of Vancouver and Prince Rupert, its other associates are Douglas-fir, Sitka spruce, silver fir, and Alaska yellow-cedar.

About three-fourths of the cedar stands of the interior districts are overmature and it is these stands that produce most of the long heavy-duty poles. Commercial stands are found from an altitude of 1,200 feet to 4,000 feet and down to sea level on the two coastal districts. The humid interior belt frequently produces trees four feet in diameter and 140 feet in height.

Cutting practices on practically all cedar pole producing lands of the province are supervised by government foresters. Forest lands are being placed on a sustained yield basis as rapidly as all practical considerations will permit.

[1]Britsh Columbia is divided into 5 administrative forest regions: Nelson, Kamloops, Prince George, Prince Rupert, and Vancouver.

Properties of British Columbia Cedar

British Columbia western redcedar poles are identical in mechanical and physical properties with poles produced from cedar of the North Idaho, Washington, and Oregon areas of the northwestern United States. Like the cedar of the States, its "most prominent characteristic—is its decidedly conical form which in the case of very old trees, includes an enormously developed base" (*3*). Thus, nature grows and builds a western redcedar tree with a form admirably suited for pole service—strength, weight, and volume or wood bulk are at the ground line area where strength is needed. The center of gravity of the pole is low. It means the pole is easily hoisted and long-boomed heavy equipment is not needed. Cedar weighs from 10 to 20 pounds per cubic foot less than other denser woods now used for poles. For instance, a class two, 55-foot cedar pole weighs 1,600 pounds, or only two-thirds to one-half as much as any of the denser pole woods now on the market. Hence, it is in a good position to absorb the freight cost to distant markets.

British Columbia western redcedar takes preservative treatment as readily as cedar from the States, and its heartwood contains the same natural decay resistant oils. It has the same soft texture. Practically all poles are butt treated, leaving a clean, soft surface for the lineman's spurs. All pole production conforms to specifications and dimensions developed by the American Standards Association (*4*).

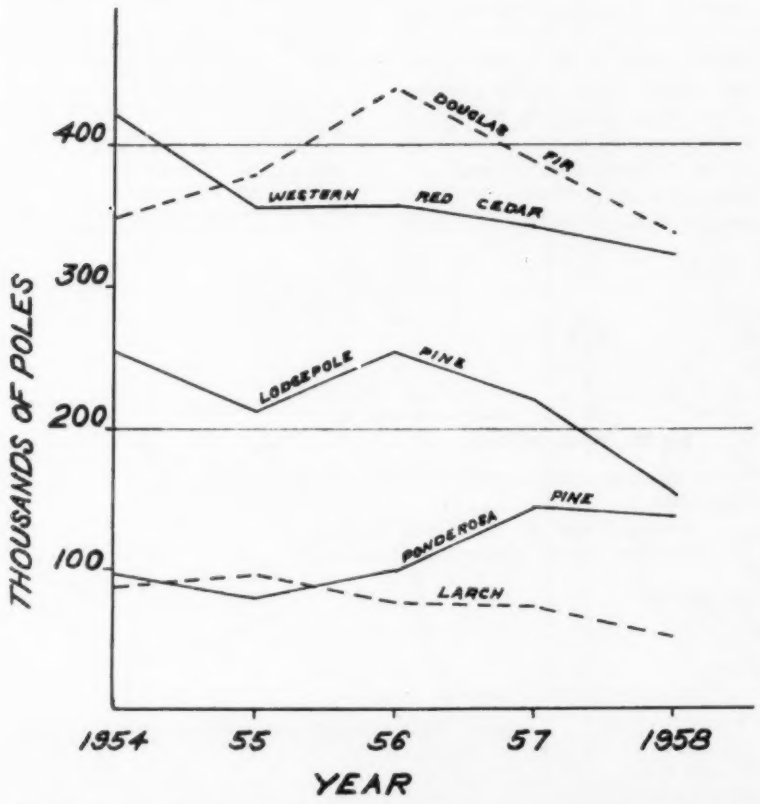


FIG. 1.—Yearly consumption of poles in the United States from timber originating in northwestern United States and British Columbia as indicated by number of poles treated in the United States.

The Supply

The "Continuous Forest Inventory" of British Columbia shows there are approximately 4,234,420,000 lineal feet of western redcedar poles in the forests of British Columbia. Using a conversion factor of 35 lineal feet per pole, this is the equivalent of 121 million poles. Table 1 shows the location of these poles by forest districts and the current rate of depletion by cutting. Information furnished by the provincial chief forester at Victoria shows an average annual cut of 400,000 poles for the 5-year period, 1954 to 1958. Without considering annual growth, the present cedar pole supply will last 300 years at current cutting rates. There is a 150-year supply in the Nelson District contrasted to a 60-year supply in the Kamloops District. The Prince Rupert District has enough cedar pole timber to last 390 years at current cutting rates. In general, the interior area of British Columbia has cedar pole timber that will last for 180 years at present cutting rates. Likewise, there is no dearth of cedar pole timber in the Vancouver, Prince

Rupert coastal area of British Columbia. There, the supply will last for the fantastic period of 570 years at present depletion rates. All this indicates there is an abundant cedar pole supply in both the interior and coastal areas of British Columbia. It is also indicative of a virgin forest seriously overbalanced with mature and decadent overmature age classes. There is little or no evidence of overcutting the cedar-hemlock forests of British Columbia. It seems apparent that demand for cedar and hemlock cannot expand sufficiently during the present generation of foresters to provide the timber cutting necessary to secure the balanced age class situation necessary for true sustained yield. However, as in the States, sustained yield is the aim of the Provincial Forest Service.

Since cedar poles are a secondary product and many of the cedar stands are decadent and badly in need of cutting, the volume of cedar poles removed is not credited to the allowable annual cut. No poles are cut under 30 feet in length, except from tops of trees.

The Canadian Pacific and Canadian National Railway systems serve the entire cedar area. Some of the numerous pole producing centers located on or adjacent to these carriers are: Canoe, Chase, Galloway, Enderby, Lumby, Salmon Arm, Sicamous, Barriere, Clearwater, Birch Island, Terrace, Hazelton, Kitwanga, and Vancouver Island.

There has been a growing dependence in recent years by the States on cedar poles from British Columbia. Table 1 shows that about one-half or 202,000 are exported annually to the States. Most of these go to the Minnesota Transfer at the Twin Cities and are distributed from there. British Columbia produces about one-half of the poles used in the States. Figure 1 gives the yearly consumption of poles in the United States originating in northwestern United States and British Columbia. The bases for these are annual statistics on poles treated in the United States prepared by the U. S. Forest Service in cooperation with the American Wood-Preservers Association. This figure also indicates that western redcedar is still one of the principal pole species of the forests of the northwestern United States. Forest Service production statistics (*5*) indicate an average annual production of 200,000 western redcedar poles in the States. It appears that United States requirements have stabilized at 400,000 western redcedar poles annually. Hence, it seems that the combined production of the Northwest States and British Columbia will have little difficulty meeting this requirement.

Summary

1. There is an abundance of cedar pole timber in British Columbia. The provincial forests contain approximately 121 million poles or enough to last 300 years at present depletion rates.

2. Canadian western redcedar has the same physical and mechanical properties as cedar from northwestern United States.

3. British Columbia is now supplying about one-half of the western redcedar pole requirements of the United States.

4. British Columbia cedar pole supplies are ample to supply any foreseeable increase in Canadian or United States pole requirements of the next 25 years.

Literature Cited

1. ANDERSON, I. V. 1947. Trends in the utilization of pole species and their effect on forest management. Proceedings, Soc. Amer. Foresters. 1947.
2. ————.Continuous forest inventory of British Columbia. Chief Forester, Victoria, British Columbia.
3. SUDWORTH, GEO. B. Miscellaneous conifers of the Rocky Mountain region. U. S. Dept. Agric. Bul. 680.
4. ————. American standard specifications and dimensions for wood poles. No. 05.1-1948. American Standards Assn., New York, N. Y.
5. WILSON, A. K. Production of poles in Montana, Idaho and northeastern Washington. Intermountain Forest and Range Expt. Sta. Ogden, Utah.

As We Went to Press

Central Rocky Mountain Section meets February 24-25 in Fort Collins, Colo.

Appalachian Section meets at the Hotel Roanoke, Roanoke, Va., February 10-11. Other meetings listed page 55.

Changes in Radial Symmetry in the Leaders of Eastern White Pine Following Inclination[1]

Arthur H. Westing

WHEN a conifer stem is bent out of its vertical orientation, its normal growth pattern becomes altered and the disorientation is counteracted. This geotropic response is accomplished apparently through the combination of a growth promotion on the lower side of the stem, a growth depression on the upper side, and the action of the compression wood which forms on the lower side (*4*). The present paper presents data on the magnitude of these responses.

THE AUTHOR is assistant professor of forestry, Department of Forestry and Conservation, Purdue University, Lafayette, Ind.

[1]This article is based on a portion of a dissertation presented for the degree of Doctor of Philsophy in Yale University. The author is indebted to Arthur W. Galston as his adviser and to Delbert C. McCune and Carol E. Westing for assisting in the field work and particularly to the last for much of the work involved in measuring the stem cross sections.

Materials and Methods

White pine (*Pinus strobus* L.) seedlings 8 to 12 years old, averaging 280 cm. in height, and having leaders averaging 50 cm. in length were used. They were chosen from among a natural stand of trees on an old field in the Yale Forest in Swanzey Township, New Hampshire. The trees were bent over as in Figure 1 so that the leader was displaced to a horizontal position. A second treatment was identical with this except that the apical 5 mm. portion of the leader was excised and the leaves of the leader removed. Controls for each treatment were vertical trees either left intact or mutilated as above. The treatments were initiated at weekly intervals from May 16 to July 4 and were collected on July 11. At that time the basal portion of each leader was excised and immediately fixed in FAA[2] for histological examination.

Determinations of the growth of a leader were made from the photograph of a cross section which was cut 3 cm. above the basal end of the leader (Fig. 1). Each photograph (actually the negative) was projected in a microfilm reader and the pertinent outlines traced onto bond paper. The resultant tracing was similar in appearance to the stem cross section illustrated in Figure 2. Such a tracing represented a twenty-sixfold magnification. Linear measurements were made directly from this tracing (Fig. 2) while areal determinations were made by first cutting out and then weighing the zone in question.

[2]FAA: 37% w/w formaldehyde + 95% v/v ethanol + glacial acetic acid + water, 2:10:1:7 by volume.

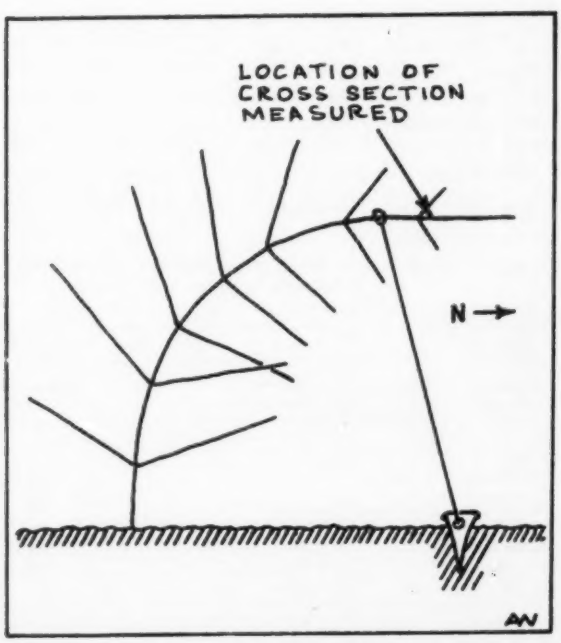


FIG. 1.—Basic field treatment.

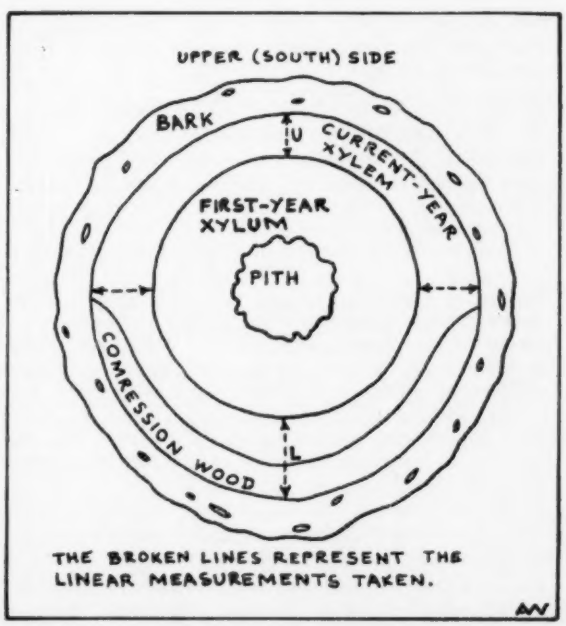


FIG. 2.—Schematic stem cross section.

Results and Discussion

The effect of horizontal displacement on upper and lower radial growths of the leaders was measured in reference to their average lateral radial growth (Fig. 2). This comparison was possible because lateral radial growth was found to be virtually uninfluenced by horizontal displacement. A summary of the data is presented in Table 1.

Upper radial growth (represented by "U" in Fig. 2) was depressed in proportion to the duration of treatment while lower radial growth (represented by "L" in Fig. 2) was similarly promoted. Straight-line curves were fitted to the data (least squares estimates). The slopes of these curves show that upper radial growth was depressed 2.4 percent per week of displacement while lower radial growth was promoted 4.9 percent per week of displacement. Areal determinations (of "current-year xylem" in Fig. 2) indicated that the total cross-sectional growth of the horizontally displaced leaders was on the average only 1.4 percent slower per week than for corresponding vertical controls.

In the case of the mutilated leaders, the upper radial growth depression was reduced to a negligible 1.1 percent per week of displacement. The lower radial growth promotion, on the other hand, was increased somewhat by the mutilation to 5.8 percent per week of displacement. Determinations of total cross-sectional growth, however, demonstrated that mutilation resulted in an over-all growth depression of 11.7 percent per week.

The cross-sectional extent of compression wood formation (Fig. 2) was determined as a percentage of over-all cross-sectional growth for the 8-week test period ("current-year xylem" in Fig. 2). The data are summarized in Table 2. It was found in the intact trees that after a lag period of about one week, development of compression wood was very nearly proportional to the duration of displacement; each additional week of displacement resulted in 7.3 percent additional compression wood formation.

The mutilated leaders also produced compression wood but at the slower rate of 5.3 percent per week of displacement. There was little difference in outward appearance between the compression wood which formed in the mutilated and intact leaders. However, it was found that the compression wood of the mutilated leaders was much easier to slice with a razor blade than that formed in the stems left intact. A possible explanation for this is provided by Wardrop (*8*) who reported that the wood that forms in the stem of *Pinus radiata* D. Don subjacent to a girdle does not differentiate fully.

Following the lag period of approximately a week, a horizontally displaced leader began to recover at the rate of about 5° per week. This recovery was thus apparently brought about by (1) a growth depression on the upper side (2 percent/week), (2) a growth promotion on the lower side (5 percent/week), and (3) the action of the compression wood which formed at the expense of normal tissue on the lower side (7 percent/week).

When a leader was decapitated and defoliated in addition to being displaced (presumably deprived of its centers of auxin production [*2, 3, 5,* and *7*]), recovery of the mutilated leaders did not commence for approximately two weeks and then progressed at the rate of about 3° per week. While the intact leaders had been found to recover more rapidly toward their apices (resulting in arc-shaped righting), the mutilated leaders recovered more uniformly along their entire lengths. The mutilated leaders, being relieved of their burden of candles and needles, did not exhibit the sag which had been observed initially in the intact leaders.

Mutilation seemed to alleviate the upper radial growth depression and enhance the lower growth promotion. Mutilation thus seemed to reduce the supply of a growth inhibitor involved in these changes in radial symmetry. Over-all cross-sectional growth, however, was retarded 12 percent per week by mutilation.

The type and amount of growth retardation brought about by decapitation and defoliation (of vertical stems) seem to differ from species to species. Jost (*2*) found that removal of the buds from the stem of *Pinus nigra* Arnold or *P. mugo* Turra. markedly inhibited radial growth as far down as the

TABLE 1.—RADIAL GROWTH OF HORIZONTALLY DISPLACED LEADERS

Duration of inclination prior to collection (Weeks)	Eight weeks' upper or lower radial growth as a percentage of the average lateral growth[1]			
	Intact leaders		Mutilated leaders	
	Upper side	Lower side	Upper side	Lower side
	Percent			
1	99	104	101	100
2	91	113	100	106
3	95	111	98	108
4	90	111	100	112
5	92	124	93	117
6	78	129	98	140
7	83	120	90	150
8	82	149	88	150

[1]Each value is based on data from 3 to 8 trees; the values for both the intact and mutilated vertical trees are each based on 9 or 10 trees.

TABLE 2.—COMPRESSION WOOD FORMATION IN HORIZONTALLY DISPLACED LEADERS

Duration of inclination prior to collection (Weeks)	Areal extent of compression wood formation as a percentage of the total cross-sectional growth for the 8 weeks[1]	
	Intact leaders	Mutilated leaders
	Percent	
1	0	0
2	10	6
3	18	15
4	27	17
5	40	22
6	49	32
7	50	40
8	60	49

[1]Each value is based on data from 3 to 8 trees; the values for both the intact and mutilated vertical trees are each based on 9 or 10 trees.

next lower node. He found that defoliation, neither by itself nor in addition to the bud removal, had any effect on radial growth. Münch (*5*), however, in similar experiments with *P. strobus* L. found that either bud removal or defoliation would retard radial growth to a certain extent while the two together would inhibit it almost completely. MacDougal (*3*) in similar experiments with *P. radiata* D. Don, on the other hand, found that bud removal had no effect on radial growth, but that defoliation retarded it. Onaka (*7*) in similar experiments with *P. thunbergii* Parl. found that while defoliation retarded radial growth, bud removal inhibited it entirely.

The finding that compression wood formed (5 percent/week) in the decapitated and defoliated leaders which were inclined was of interest since results published previously had indicated that this might not occur. Hartmann (*1*), for example, girdled and inclined stems of *Picea abies* (L.) Karst. and reported that no compression wood formed below the girdle as far as the next lower node. Onaka (*6*) reported that compression wood would not form below a girdle in the leaning stem of a conifer as far as the next lower leaves. It thus appears that the necessary substances for the formation of compression wood for a month or more were either present in the stem or produced there or transported there acropetally. Sustained acropetal transport of this nature has been reported for *Sequoia sempervirens* (D. Don) Endl. (*3*).

Literature Cited

1. HARTMANN, F. 1942. Statische Wuchsgesetz bei Nadel- und Laubbäumen. Vienna: Springer-Verlag. 111 pp.
2. JOST, L. 1893. Ueber Beziehungen zwischen der Blattentwickelung und der Gefässbildung in der Pflanze. Botanische Zeitung 58:89-138 + Plate V.
3. MACDOUGAL, D. T. 1939. Features of growth-control in trees. Proc. Am. Phil. Soc. 81:421-445.
4. MÜNCH, E. 1937. Entstehungsursachen und Wirkung des Druck- und Zugholzes der Bäume. Forstliche Wochenschrift Silva 25:337-341, 345-350.
5. ————. 1938. Untersuchungen über die Harmonie der Baumgestalt. Jahrb. wiss. Botan. 86:581-673.
6. ONAKA, F. 1949. Studies on compression wood and tension wood. (In Japanese with English summary.) Wood Res. Inst., Kyoto. Bul. No. 1. 88 pp.
7. ————. 1950. Effects of defoliation, disbudding, girdling, and other treatments on growth, especially radial growth, of conifers. (In Japanese with English summary.) Kyoto Univ. For. Bul. 18:55-95.
8. WARDROP, A. B. 1957. Phase of lignification in the differentiation of wood fibers. Tappi 40:225-243.

Forestry in the Tenth Pacific Science Congress

Forestry will be one of the nine broad fields of science to be covered at the Tenth Pacific Science Congress scheduled for August 21 to September 6, 1961, in Honolulu, Hawaii. This will mark the return of these Congresses of the Pacific Science Association to the site of the first Congress held in 1920. Forestry has been included in the programs since the 1923 Congress in Australia.

The Pacific Science Association is an international, regional, non-governmental scientific organization. Some fifty-two countries or territories interested in the study of scientific problems of the Pacific Region participate in the Association, each being represented by its principal scientific organization.

The Section of Forestry at the Tenth Congress is being organized by Dr. John Zivnuska, School of Forestry, University of California, Berkeley, Calif. The program will include a series of symposia organized in three divisions, sessions for contributed papers, and a post-session field trip to the islands of Maui and Hawaii. In addition, a report from the Standing Committee on Forestry of the Pacific Science Association will be presented by its chairman, L. W. Bryan, Division of Forestry, Hilo, Hawaii.

The Division of Forest Biology is being organized by Dr. N. T. Mirov, Pacific Southwest Forest and Range Experiment Station, U. S. Forest Service. The program will include symposia on tree improvement for the Pacific region, research methods in the study of forest regeneration, and animal-forest relationships.

The Division of Forest Management is headed by E. I. Kotok, formerly in charge of research for the U. S. Forest Service. Symposia will be held on forest inventories, forest growth studies, and fire research.

The Division of Forest Products is under Dr. James L. Zeigler, Arthur D. Little, Inc., San Francisco. Symposia will include wood anatomy and taxonomy, wood chemistry, timber physics, and research and product development.

In addition to these symposia there will be sessions for contributed papers on any aspect of forestry science. Such papers are solicited from qualified foresters in any country represented in the Pacific Science Association. Emphasis in the papers should be on questions of research methods and problem formulation of general interest in the Pacific region. Summaries of proposed papers should be submitted in duplicate to the section organizer by March 31, 1961. English is the official language of the Congress.

Further information concerning the forestry program or contributed papers in forestry can be obtained by writing to the Organizer, Section of Forestry, Tenth Pacific Science Congress, 243 Mulford Hall, Berkeley 4, Calif. Correspondence on all other matters should be addressed to the Secretary-General, Tenth Pacific Science Congress, Bishop Museum, Honolulu 17, Hawaii.

Soil Moisture-Seedling Growth Relations in Conversion Planting of Oak Ridges to Pine

H. L. Williston and
D. C. McClurkin

EARLY in 1956 a study was established near Oxford, Miss., to determine how three intensities of hardwood removal would affect soil moisture relations, and thereby the growth and survival of loblolly pine (*Pinus taeda* L.) seedlings planted on blackjack—post oak ridges.

The Experiment

Nine 0.4-acre plots were staked out to form 3 blocks on a ridge of shallow loessial soil belonging to the Providence series. This soil characteristically has a silt loam surface and a silty clay or clay pan at depths of 18 to 24 inches. Underlying the loess at a depth of 3 to 4 feet are Coastal Plain deposits of friable, sandy clay loam or clay.

Loblolly seedlings with stem length of 6 to 8 inches were planted under an existing hardwood stand on March 1 at a 6- × 7-foot spacing. The hardwood stand per acre consisted of 5,078 stems 6 inches tall to 0.5 inch d.b.h., plus 1,319 stems from 0.6 inch to 12 inches d.b.h. Basal area of all hardwoods larger than 0.5 inch d.b.h. averaged 53 square feet per acre. Blackjack oak (*Quercus marilandica* Muenchh.) made up 33 percent of the stand, post oak (*Q. stellata* Wangenh.) 32 percent, hickory (*Carya* spp.) 7 percent, and upland Shumard oak (*Q. shumardii* Buckl.) 4 percent. White oak (*Q. alba* L.), black oak (*Q. velutina* Lam.), red oak (*Q. falcata* Michx.), blackgum (*Nyssa sylvatica* Marsh.), elm (*Ulmus* spp.), eastern redcedar (*Juniperus virginiana* L.), persimmon (*Diospyros virginiana* L.), hawthorn (*Crataegus* spp.), and huckleberry (*Vaccinium* spp.) were also represented.

Three hardwood treatments were randomly assigned to plots and applied during the second week of April, when the hardwoods were from one-third to one-half leafed out:

Treatment 1.—Overstory removed; all hardwoods larger than 3.5 inches d.b.h. were frill-girdled and dosed with a water emulsion of a low-volatile ester of 2,4,5-T (4 pounds acid per hundred gallons of formulation).

Treatment 2.—Understory removed; all hardwoods from 6 inches tall to 3.5 inches d.b.h. were cut down and the stumps treated with an oil solution of a low-volatile ester of 2,4,5-T (20 pounds ahg).

Treatment 3.—All hardwoods 6 inches tall and larger were treated as in Treatments 1 and 2.

Pine height growth, survival, and insect damage were inventoried on 100-tree units in the center of each 0.4-acre plot at the end of each of the first three growing seasons. The competing hardwoods were reinventoried in October, 1958.

Pore space and volume-weight were measured on undisturbed soil cores taken from each plot. Disturbed samples from the surface to a depth of 42 inches were used to determine texture. Samples in the surface foot provided wilting-point values. As Table 1 indicates, the three blocks are very similar in physical properties.

Soil moisture content was determined from King-tube samples at points randomly selected on each plot. The surface foot was sampled each week, the second foot three weeks out of every four, the third foot two weeks out of every four, and the fourth foot every four weeks. This schedule of sampling was decided upon because the

TABLE 1.—PHYSICAL PROPERTIES OF SOIL ON THE THREE STUDY BLOCKS. SURFACE-FOOT VALUES REPRESENT THE AVERAGE OF 18 SAMPLES, LOWER DEPTHS THE AVERAGE OF 9 MEASUREMENTS

Block	Depth	Retention pore space	15 atm. wilting point	Vol. wt.	Texture[1]
	Inches	*Pct. by vol.*	*Pct. by vol.*	*Gms./cc*	
I	0-6	25	10.6	1.36	SiL
	6-12	31	18.7	1.32	SiC
	12-18	44	----	1.40	C
	18-24	43	----	1.48	C
	30	39	----	1.59	CL
	42	33	----	1.70	SiCL
II	0-6	28	10.1	1.30	SiL
	6-12	28	15.2	1.33	CL
	12-18	41	----	1.49	C
	18-24	40	----	1.52	C
	30	35	----	1.66	CL
	42	30	----	1.74	CL
III	0-6	27	8.6	1.29	SiL
	6-12	28	17.2	1.37	SiC
	12-18	42	----	1.41	SiC
	18-24	42	----	1.53	SiC
	30	37	----	1.60	SiCL
	42	37	----	1.64	SiCL

[1]Si = silt; L = loam; C = clay.

THE AUTHORS are members of the Southern Forest Expt. Sta., Forest Service, U. S. Dept. Agric., New Orleans, La.

lower depths are unlikely to change moisture content as rapidly as the surface layers.

Pine Seedling Response to Hardwood Removal

Survival was excellent on all plots (Table 2). It was significantly better where all hardwoods had been removed than on those for the other two treatments.

Seedlings on the plots where all hardwoods had been removed (Treatment 3) also outgrew the others from the first year on. After three years they averaged almost 9 feet in height (Fig. 1). Thirty percent were 10 feet tall or taller, and two individuals were 13 feet tall.

Survival and growth differences between Treatments 1 and 2 failed by a narrow margin to attain the threshold of statistical significance.

Immediately after treatment the basal area of the residual hardwood stands averaged 14 square feet, 39 square feet, and 0 square feet per acre on Treatments 1, 2, and 3. By October, 1958, the hardwood basal areas were 24, 47, and 4 square feet. The comeback of the small hardwoods in particular emphasizes that release stimulates hardwoods as well as pine.

To be successful, release in this timber type must get the planted pines off to such a good start that they can outgrow the hardwood sprouts. Forty-nine percent of the pines on the Treatment-1 plots, 50 percent of those on the Treatment-2 plots, and only 2 percent of those on the Treatment 3 plots were overtopped by hardwood sprouts at the end of three growing seasons. On the average, the overtopped pines were 66 percent as tall as the average of all open-grown pines. Whether the height difference is due to light or to variations in available soil moisture is not known. On a given plot, low shade appears to have caused more suppression than high shade. Though some of the pines may outgrow their overtopping competitors, the plots in Treatments 1 and 2 need another hardwood release treatment, while the Treatment 3 areas do not.

The incidence of tip moth attack increased each year, until by October, 1958, nearly all seedlings were infested. Differences between treatments were highly significant only at the end of the first growing season. Damage, although less prevalent on Treatments 1 and 2, has been more severe because the seedlings on these plots, growing slower, have been less able to recover from terminal kill. On the Treatment 3 plots much of the damage has been confined to the laterals. Even where the terminals were attacked, growth was slowed but momentarily.

Landowners who have converted low-grade hardwood stands to pine by underplanting and deadening the overstory are frequently concerned over the damage to the young pine by the falling hardwoods. In this study 80 out of 804 living seedlings were thus damaged during the first three years. Of these 80 seedlings, only 4 died.

TABLE 2.—SURVIVAL, HEIGHT, AND TIP MOTH ATTACK AT END OF EACH OF THE FIRST THREE GROWING SEASONS

Treatment	Survival			Average height			Tip moth incidence		
	1956	1957	1958	1956	1957	1958	1956	1957	1958
	Percent			*Feet*			*Percent*		
Overstory removed	90	89	88	1.2	3.0	5.3	12	84	95
Understory removed	86	84	83	1.1	2.2	4.1	5	74	94
All hardwoods removed	95	95	94	1.5	5.0	8.8	28	100	100

FIG. 1.—Where all hardwoods were removed, pines averaged nearly 9 feet tall after three growing seasons.

Effects of Hardwood Removal on Soil Moisture

Normal growing-season rainfall —March through October—for this area is 33.5 inches. A deficit of 3 inches in 1956 was followed by surpluses of 2 and 8 inches in 1957 and 1958. July and September, 1956, August, 1957, and August, 1958, were abnormally dry.

The overstory drew large quantities of moisture from all measured levels in the soil—as indicated by the fact that Treatment 3 plots had significantly more moisture to a 4-foot depth than did Treatment 2 plots (Table 3). Understory hardwoods drew less water from the 0- to 24-inch layer than the overstory did but used equal amounts from the 24- to 48-inch layer. Though grasses had invaded plots where all hardwoods had been removed, moisture content in the lower depths was still greater than where either the overstory or understory hardwoods remained.

These results indicate that moisture content in the 24- to 48-inch zone was most critical for pine trees. On plots where all hardwoods were removed, moisture in this zone was greatest and pine tree survival and growth was best.

Moisture differences in the 0- to 24-inch layer had less effect on seedling growth. However, where only the overstory was removed, moisture in the 0- to 24-inch zone was greater, and tree growth and survival were slightly better than where only the understory was removed.

TABLE 3.—MOISTURE PRESENT IN THE SOIL PROFILE. EACH ENTRY REPRESENTS THE AVERAGE OF THREE PLOTS

Month and year	0- to 48-inch depth			0- to 24-inch depth			24- to 48-inch depth		
	T-1[1]	T-2	T-3	T-1	T-2	T-3	T-1	T-2	T-3
	Inches								
March									
1956	16.4	16.0	16.3	9.4	8.2	8.7	7.0	7.8	7.6
1957	15.9	15.4	15.3	8.7	8.3	8.6	7.2	7.1	6.7
1958	—	—	—	—	—	—	—	—	—
April									
1956	15.8	15.3	15.3	8.5	8.6	8.5	7.3	6.7	6.8
1957	15.5	13.4	14.4	9.1	6.9	8.1	6.4	6.5	6.3
1958	16.0	15.0	16.9	9.2	8.3	9.2	6.8	6.7	7.7
May									
1956	14.8	14.6	16.4	8.5	7.9	8.5	6.3	6.7	7.9
1957	13.6	15.7	16.6	7.6	8.2	8.4	6.0	7.5	8.2
1958	15.6	14.0	15.8	8.9	7.9	8.6	6.7	6.1	7.2
June									
1956	13.8	13.1	16.1	7.7	6.7	8.6	6.1	6.4	7.5
1957	15.5	14.3	14.9	8.5	7.6	8.2	7.0	6.7	6.7
1958	13.5	11.6	15.0	7.5	6.1	7.3	6.0	5.5	7.7
July									
1956	12.7	11.3	13.9	6.0	4.9	6.9	6.7	6.4	7.0
1957	14.5	12.5	13.5	7.7	6.0	7.2	6.8	6.5	6.3
1958	16.0	14.8	16.3	8.8	8.4	8.6	7.2	6.4	7.7
August									
1956	11.7	8.6	13.9	5.4	4.1	6.7	6.3	4.5	7.2
1957	12.2	11.3	13.1	6.4	5.6	6.1	5.8	5.7	7.0
1958	13.5	11.2	12.6	6.9	5.6	6.4	6.6	5.6	6.2
September									
1956	—	—	—	—	—	—	—	—	—
1957	11.8	10.7	12.9	6.6	5.6	6.4	5.2	5.1	6.5
1958	13.6	10.5	12.4	7.0	5.5	6.4	6.6	5.0	5.7

[1]T-1 = Overstory hardwoods deadened.
T-2 = Understory hardwoods deadened.
T-3 = All hardwoods deadened.

Discussion

How much of the hardwood overstory should be removed initially to conserve soil moisture for pine height growth and survival? Since total removal of hardwoods produced highly significantly better pine survival and growth than did partial hardwood treatment, all hardwood competition should be removed where economically feasible.

Which offers the greatest competition to the planted pine during the early years—the hardwood overstory or the hardwood understory? The overstory, probably. Where the overstory was removed, seedlings were somewhat taller at the end of three years than where the understory only was eliminated. Hence, where elimination of all hardwood competition is too expensive, the next best course is to remove only the overstory.

Hardwood-control Treatment 1 cost $6.56 per acre; Treatment 2, $31.07; and Treatment 3, $35.32. It is obvious that eradication of the hardwoods smaller than 4 inches d.b.h. by hand tools is exorbitantly expensive. Where thousands of small hardwood stems must be treated on each acre, it will be necessary to turn to silvicides applied by airplane or mist blower.

Conclusions

Loblolly pine seedlings underplanted in blackjack-post oak stands on loessial ridges in north Mississippi will survive and grow well if released from hardwood competition immediately.

Plots on which all hardwoods were controlled had better seedling survival and growth and more soil moisture than did plots on which only the overstory or understory hardwoods were treated.

A hardwood overstory seems to offer slightly more competition to underplanted pine seedlings during the first three years than does a dense understory of hardwood brush. On plots where only the overstory had been removed, seedling survival and height growth were slightly better, and the top 2 to 3 feet of soil had significantly more moisture, than where only the understory had been eliminated. Where all hardwoods had been removed, a great increase in annual vegetation depleted the moisture in the 0- to 12-inch layer

as rapidly as where only the overstory had been controlled.

Overstory vegetation appears to draw more moisture from the upper soil zones than does the understory. At depths of 2 to 4 feet, no difference could be noted in amounts of moisture removed by overstory and the understory.

Low shade from the understory has suppressed pine seedlings more than high shade from the overstory.

Anything less than complete removal of hardwoods resulted in the need for a repeat release about three years after the initial treatment.

During the first three years following conversion, about 10 percent of the underplanted pines were damaged by falling hardwoods, but less than 1 percent of the damaged pines were killed.

Region Nine Fire Committee Contributes to Progress

Some combinations of states have Congressionally approved fire compacts to assure that their forces work together on tasks of mutual concern. Some states work to a large extent alone. Nine states and 14 national forests in the North Central Region of the U. S. Forest Service have developed a close cooperation in fire control through 16 years of participation in a Region 9 Fire Committee. Starting originally as a group interested in developing more effective methods and equipment for fire suppression, this committee of state and federal foresters has expanded its interest to other phases of fire control since it was first organized in 1944. Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, North Dakota, Ohio, and Wisconsin are represented in this factfinding and development group.

The success of this committee is due to the wide scope of the meeting programs, the informality and friendly fellowship common at the meetings, and to the associations which have carried over into regular work.

Meetings consist of alternate indoor winter conferences and summer field demonstrations. State and federal representatives co-chairman each meeting.

The most recent field meeting held at Carbondale, Illinois, June 15-17, 1960, was a typical session. The program included discussions, exhibits, and field demonstrations. Conventional matters such as law enforcement, damage appraisals, fire research, fire behavior, and fire weather forecasting are some of the topics. Preventive measures to protect forest areas such as the use of chemicals to control brush along roads, in fire breaks, and to retard the progress of oncoming fires were studied in the field. As the result of the three-day Carbondale meeting, over 150 fire protection men returned home with new ideas and a better understanding of the program in the other states of the North Central Region.

This North Central Region Fire Committee through the joint effort of its members has been highly productive. It has developed a strong spirit of cooperation among state and federal fire protection men, and has speeded the region-wide adoption of machines and techniques by the exchange of fire control experience and knowledge.

EDWARD RITTER
U. S. Forest Service, Region 9, Milwaukee, Wis.

Notes and Observations

Shortleaf-Loblolly Reproduction Losses Moderate, Following Seed Tree Felling

The retention of seed trees long after they have served their purpose often creates apprehension lest the destruction of reproduction be excessive at time of harvest. Consequently, prompt removal of seed trees soon after regeneration is usually advocated. Trousdell,[1] for instance, removed six 20-inch loblolly seed trees per acre, in the presence of one- and two-year-old seedlings numbering up to 5,000 per acre, with a loss of only 16 to 17 percent of the reproduction. For a number of reasons, however, the cutting of seed trees may be delayed long after regeneration has been achieved. Such was the case on one of the management studies at the Crossett Experimental Forest in south Arkansas. Part of the study consisted of three plots, each 4.3 acres in size, which were cut in 1937. Approximately 13 loblolly and shortleaf seed trees were left per acre. These were all 10 inches or larger in diameter. A magnificent catch from a bumper seedfall in 1939 was augmented by other good seed crops.

By 1947 the seed trees had full, well developed crowns, and a dense understory of pine reproduction occupied the plots. Draped fuel was prevalent, so that reproduction loss in the event of fire would be drastic. This hazard combined with the rapid, high quality growth of the seed trees encouraged their retention long after the plots were regenerated.

An inventory was made in the fall of 1957 preparatory to a combined harvest cut of the entire overstory and a thinning in the understory. The proportion of the area stocked with pine of all sizes was determined by milacre plot sampling. At that time the stand appeared as pictured in Figure 1. Average stand statistics are given in Table 1.

Pines of sawtimber size ranged from 10 to 33 inches d.b.h. Ingrowth had increased the number of these trees from the original 13 per acre to 22 per acre. When these stems were cut in 1958 they yielded 6,838 board fee per acre (International ¼-inch rule). An examination to determine damage was made in 1959, when sufficient time had elapsed to show if reproduction bent or injured by the tops of felled trees would survive. Sample plots occupied by the tops of felled trees and with no surviving reproduction were classified as destroyed. It was presumed that the ground area occupied by a top had been stocked with pine reproduction which was destroyed by the felled tree. Damage to individual stems was not assessed.

Table 2 gives the proportion of

[1]Trousdell, K. B. 1952. Loblolly pine seed-trees removed with minor damage to seedling stand. U. S. Forest Serv. Southeast. Forest Expt. Stn. Res. Note 8, 2 pp.

TABLE 1.—STAND STATISTICS

Proportion of milacres stocked with pine		84 percent
Basal area per acre of trees 10 inches d.b.h. and larger		37.5 sq. ft.
Average diameter of trees 10 inches d.b.h. and larger		17.7 inches
Number of pines per acre		
10 inches d.b.h. and larger	22	
4-9 inches d.b.h.	299	
Less than 4 inches d.b.h.	1,123	
Total	1,444	

TABLE 2.—DESTROYED REPRODUCTION

Plot	Area destroyed	Basal area per acre of felled trees 10 inches d.b.h. and larger
	Percent	*Sq. ft.*
A	9.6	31.1
B	15.4	34.9
C	16.3	41.9
	13.8	37.5

FIG. 1.—Dense, advanced pine reproduction had developed under the seed trees.

the total area of each plot on which pine reproduction was destroyed. Thus, milacre stocking of pine reproduction (average for all 3 plots) was reduced from 84 percent to 70.2 percent.

Trees usually did not crush an area of reproduction equal in size and shape to the vertical contour of their crowns. One year after the seed trees had been felled, much of the area occupied by the tops appeared to be shaded by the expanding crowns of adjoining trees, although no quantitative measurement of this expansion was secured. Where the outer edges of the crowns fell, much pine reproduction survived with little or no injury. Considering the basal area and volume cut, the proportion of area damaged was much less than anticipated. Wherever possible, trees had been dropped on top of one another, and this practice curtailed damage.

CHARLES X. GRANO
Southern Forest Experiment Station, Forest Service, U. S. Department of Agriculture, New Orleans, La.

Soil Settlement Caused by Tree Roots

General observation indicates that main surface roots, near the trunk of a tree, through growth, exert enormous pressure. They sometimes force up pavements or sidewalks, or cause boulders to split.

A peculiarity of tree roots that is not greatly appreciated, particularly when trees are growing in clay soils, is that under certain climatic conditions they can cause appreciable settlement of the soil.

Trees planted in wet clay have caused bowl-shaped depressions over 4 inches in depth. These are deepest toward the tree except for the nearest few feet where root volume causes expansion. This effect may be appreciable. The depressions are caused by changes in soil moisture to depths of 8 feet and to distances from the trunk greater than the tree height, according to measurements in England.[1]

Photo U.S. Bur. Public Roads.

FIG. 1.—Settlement of fence adjacent to trees.

Photo U.S. Bur. Public Roads.

FIG. 2.—Bowl-shaped depression around tree indicated by distortion of walls.

Figure 1 shows settlement of a fence by each tree in a row planted after fence construction. In Figure 2, settlement of the wall shows the bowl-shaped depression caused by the tree at the left.

This settlement often causes distortion of pavements or buildings on shallow foundations, especially where the soil was quite wet before construction. Shrinkage problems are common where long dry seasons are common, as in Texas, Burma, and South Africa; however, considerable trouble has also been experienced in humid climates during droughts.

In a development in Alexandria, Virginia, 40 structures have settled because trees were planted in wet clay when the buildings were constructed in 1942. While eliminating the trees will stop the settlement, it is desirable to find an economical method of protecting the buildings without destroying the trees.

Occasionally trouble is caused by swelling when shallow foundations

[1]The effect of vegetation on the settlement of roads and structures. The Institution of Civil Engineers, Proceedings of the Conference on Biology and Civil Engineering, 1948. pp. 181-222.

[2]Feit, E. J. Influence of vegetation on soil moisture contents and resulting soil volume changes. Third International Conference on Soil Mechanics and Foundation Engineering, Switzerland, 1953, Vol. I, p. 24.

are placed on land recently cleared of trees.[2] An apartment house in Washington, D. C., which the writer was asked to investigate, was split in two by swelling of clay beneath the shallow foundation of the stairwell.

Clay soils shrink (or swell) as their water content is decreased (or increased). In dry summer weather tree roots take water from the soil, causing it to shrink more than it would from simple evaporation. In wet weather, or during the winter where deciduous trees are involved, the soil absorbs water and swells. Due to imperfect elasticity of the soil structure, the shrinkage the first time it dries is greater than subsequent swell.

EDWARD S. BARBER
University of Maryland

Still Another Explanation of the Theory Behind Point Sampling

As we were planning to use point sampling in a silviculture field exercise, it seemed desirable to explain to the students not only how to use the method but why it works. Grosenbaugh's[1,2] explanations of why it works do not get through to all students. The explanation which follows may have some merit in its short step by step progress toward conclusion.

Experience shows[3] that it is convenient to have each tree which is tallied represent *10 square feet of basal area per acre* which may be written as the fraction $\frac{\text{10 sq. ft. basal area}}{\text{1 acre (43560 sq. ft.)}}$. This is a $\frac{\text{stem basal area}}{\text{tree plot area}}$ ratio of $\frac{10}{43560}$ or $\frac{1}{4356}$ or $\frac{(1)^2}{(66)^2}$. If we so desire, a tree tallied can represent 20 square feet, 50 square feet or any other amount of basal area per acre. For example, for each tree tallied to represent 50 square feet of basal area per acre, the $\frac{\text{stem area}}{\text{plot area}}$ ratio is $\frac{50}{43560}$ or $\frac{1}{871.2}$.

To progress from a $\frac{\text{stem area}}{\text{plot area}}$ ratio to a $\frac{\text{d.b.h.}}{\text{plot diam.}}$ ratio, A (area of a circle) $= 0.7854D^2$ and $D = \sqrt{\frac{A}{0.7854}}$. Stem area can be represented by $(1)^2$ and plot area by $(66)^2$. By substituting these values for A in the preceding formula for D, $\frac{\text{d.b.h.}}{\text{plot diam.}} = \frac{\sqrt{\frac{(1)^2}{0.7854}}}{\sqrt{\frac{(66)^2}{0.7854}}} = \frac{\frac{1}{\sqrt{0.7854}}}{\frac{66}{\sqrt{0.7854}}}$

$= \sqrt{\frac{1}{0.7854}} \times \frac{\sqrt{0.7854}}{66} = \frac{1}{66}$.

If $\frac{\text{d.b.h.}}{\text{plot diam.}} = \frac{1}{66}$ then $\frac{\text{d.b.h.}}{\text{plot radius}} = \frac{1}{33}$ or plot radius is 33 times d.b.h. where both are expressed in the same unit (usually feet).

Figure 1 and the following calculations explain how the critical angle is derived from a basal area factor of 10 (10 square feet of basal area per acre).

$$\angle \text{BAC} = \sin \frac{0.5}{33}$$

$$\angle \text{BAD} = 2 \sin \frac{0.5}{33}$$

$$= 104.18'$$

Almost immediately after working through this to-be-hoped clear explanation, I found a reference to an article by Afanasiev[4] on the same problem. He, too, had been confronted with the need of explaining to his students why it works. His explanation, although different from this one, seems clear.

EDWARD G. ROBERTS
Mississippi State University, State College, Miss.

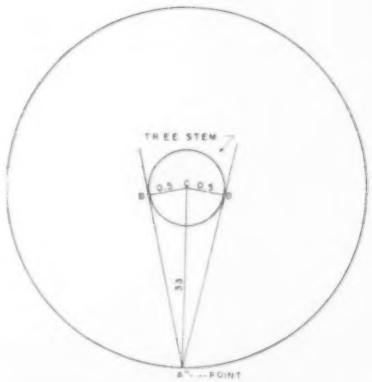


FIG. 1.—Representation of tree stem and plot circumscribing the tree.

[1]Grosenbaugh, L. R. Plotless timber estimates—new, fast, easy. Jour. Forestry 50:32-37. 1952.

[2]Grosenbaugh, L. R. Shortcuts for cruisers and scalers. U. S. Forest Service. Southern Forest Expt. Sta. Occ. Paper 126. (Processed). 1952.

[3]It is convenient for these reasons: (a) it is satisfactory optically with a stick, (b) it gives a reasonable count at a point (rarely over 15 trees), and (c) it makes basal area calculations simple (the count at a point times 10 equals basal area per acre).

[4]Afanasiev, Michael. The Bitterlich method of cruising—why does it work? Jour. Forestry 55:215-217. 1957.

Xi Sigma Pi Officers Announced

This is to advise that the national officers for Xi Sigma Pi, forestry honorary fraternity, for the 1960-1962 period are as follows:

Kenneth R. Swingford, Forester;

James W. Willingham, Associate Forester;

Edward T. Sullivan, Secretary-Fiscal Agent.

The national office will be located at the School of Forestry, University of Florida, for this period.

EDWARD T. SULLIVAN
National Secretary-Fiscal Agent, Xi Sigma Pi

Points of View

Registration of Foresters—The Negative

The current insistence by some foresters that we seek the passage of legislation to register foresters may be symptomatic of ills which are plaguing our group. The present demand for registration represents to me a failure to recognize the potential and the function of the SAF and a lack of desire to improve and to strengthen the Society. A law on the statute books gives a group neither the dignity nor the power that it may have lacked before the passage of the act. I will indicate some of the weaknesses in our thinking about registration, and I believe you will agree that our Society of American Foresters, and not registration, provides the answer to our needs.

We represent ourselves as professionals, but if we were to examine the type of work foresters are doing I think we would find that many foresters are involved in the performance of manual tasks rather than the "primarily intellectual work" generally prescribed as a requisite to a professional. We become enbroiled in the mechanics of silviculture and not necessarily the principles of silviculture. Dean Dana (Dean Emeritus, School of Forestry, University of Michigan) made what I believe to be an apt appraisal of our current position; he asks if men in forestry today are not often overtrained for the work they are doing and undertrained for the work they should be doing.[1]

Often the forestry division of a company is subordinated to the procurement division, and it is the procurement division, or some other division, which actually determines forest management policy. We need to grow up in our thinking as to what constitutes the difference between technical forestry and professional forestry. The current laws for registering foresters are deficient in this respect, and only a militant professional society can help to improve the situation; laws simply fix the *status quo*.

If we were to approach our respective legislatures with our request, i.e. to allow us the exclusive use of the title of Forester, how would we define the job of a forester? Recently, one of the originators of the Alabama Registration Law stated that one of the weaknesses of current legislation is the lack of a legal definition of the practice of forestry. It is no wonder that some foresters have had difficulty in their attempts to obtain restrictive legislation. If it is hard for a forester to understand and to define the job, how can we hope to explain it to people outside the group? How can we convince the public that we are what we are and not what many of them think? If we are unsure of what a professional forester is, why should we seek to reserve for our exclusive use of the title of forester? Perhaps as a profession we should start now to define ourselves and to disseminate this information to the public, which in many instances does not recognize the difference between a forester and a woodsman. There has been a good start made by the forest industry; in fact, it has assumed some of our own responsibility with regard to our profession.

Let us turn now to the matter of who would be most affected by a registration law. In 1956 about 45 percent of all foresters in the United States were employed by public agencies. At that time the percentage of foresters in private employment was 43 percent. Of this 43 percent the consulting foresters, the group which would benefit most from public sanction, represented only 7 percent—possibly the percentage for consulting foresters has increased since 1956 and should now be about 9 percent. If we apply this percentage to the total of about 13,000 foresters in the SAF we find that only about 1,200 foresters would benefit directly from registration.

Governmental agencies and private companies set their own standards of employment and it would seem that a roster of registered foresters would be of little benefit to them. Furthermore, these organizations usually hire newly graduated foresters, and this group is not eligible to register under existing laws. On this basis of numbers alone, it would appear that there are too few foresters directly concerned to warrant the expense of passing the 50 registry bills required. On the other hand, the SAF now maintains a list of consulting foresters. Why not make this list available to those who express the need?[2]

Of the registered foresters in the State of Georgia in 1959, only about 28 percent were in public employment. The remaining 72 percent were either industrial or consulting foresters. Registration presents a problem for the publicly or privately employed forester who has already met his employer's standards and does not necessarily need the protection of registration but who must work with the general public. If he does not become registered (an expensive undertaking) there is a danger that he may not be as readily accepted as he would be if he were registered. In addition, such a person, instead of having to fulfill one set of requirements may be forced to meet three sets of requirements: his employer's, the registration board's, and the SAF's. If he were to change jobs or be transferred to another state this could create an additional problem. (With only three states registering foresters, two of these are now experiencing difficulty with their reciprocity

[1]Dana, Samuel T. Report of the study of education in forestry and related fields of natural resources management. Jour. Forestry 58:141-142. 1960.

[2]*Editor's note:* Reprints of annual listings are available on request from the JOURNAL.

agreements.) Would it not be better to have one national set of standards set up by the Society instead of fifty sets of standards which will be needed for complete registration?

As members of the SAF I think we need to look into the effects registration might have upon the Society. There is not a guarantee that registration will strengthen the Society, but there is a good possibility that registration may detract from and therefore weaken the Society. By creating a number of boards, each with its own set of standards to pass on professional competence, we immediately detract from Society membership. At present about 14 percent of the registered foresters in Georgia are not members of the SAF. There is good reason to believe that a number of practicing foresters who register will not feel the need for SAF membership.

When a restrictive type of legislation is proposed it is usually wise to investigate the motives and the possible gains; who is it who seeks to obtain restrictive legislation in forestry practice? What do they define as the area of interest? Can we be sure that part of the motivation for registration is not to seek ultimately to restrict the number of people who may practice forestry in order to create an artificial shortage of practitioners? Failure of the Minnesota Forester Registration Bill to get out of committee last year was attributed to action of a union lobby. The union is ever eager to increase its membership, particularly in the white collar fields.

If the motive for registration is a professional one, to protect the public, then why is not the Society of American Foresters the organization to oversee the ethics and the standards of forestry practice? It seems to me that for foresters to reach the desired level of professional stature we will need to have a more professional approach toward who is and who is not a forester and to convey this impression to the people for whom we work, to our working associates, and eventually to the public. A continued strengthening of the membership requirements of the Society and an upgrading of admission requirements are part of the process of gaining professional stature. Improvement in education is in no way provided for in existing registry laws.

There is some question in my mind whether foresters can truly claim professional status. We appear to have many of the requirements but may lack the depth of understanding which is required of a profession. As foresters we should first have our professional standards well in hand before we go shooting off in fifty different directions, setting up what will most likely be fifty different sets of standards.

Registration is sometimes viewed as the means of eliminating unqualified practitioners. Charlatans are always a problem in a profession, registered or not. Public education appears to be the best protection against fraud.

If we advertise the qualifications of SAF membership, prominently display our membership certificates, advertise that we are members of the SAF, and enforce our code of ethics, we will achieve the status we are seeking. A strong professional society, our high standard, and our good business practices can do more for us and the general public than a law on the statute books.

HAROLD W. HOCKER, JR.
Department of Forestry,
University of New Hampshire,
Durham

Important Notice to Subscribers

If you change your address please notify the JOURNAL OF FORESTRY, preferably in advance, by letter, post card, or post office form number POD 3573. Be sure to give your old, as well as the new, address with your postal zone number if any.

You should also notify your local post office on postal form number POD 3575 of your change of address. Both postal forms are obtainable at any post office.

Copies of the JOURNAL will not be forwarded by the Post Office Department. Hence, in order to avoid missing your copy as well as to prevent extra expense to the Society in supplying duplicates, you are urged to notify the JOURNAL as soon as you know your new address, a month in advance of change if possible.

JOURNAL OF FORESTRY
425 Mills Building
17th Street at Pennsylvania Avenue, N. W.
Washington 6, D. C.

Book Reviews

Hermann von Schrenk: A Biography

By James E. Cronin. 274 pp. Illus. Kuehn-Publisher, Chicago, Ill. 1960. $4.50.

Author Cronin has given his readers a detailed personal record of the life and activities of the brilliant, dynamic, and controversial Hermann von Schrenk, "the man who was timber." An enormous amount of research obviously went into the preparation of this biography and the author, who is neither a botanist nor a wood technologist, is to be commended for his courage in attempting to evaluate the many technical papers published by von Schrenk in the fields of wood preservation, forest pathology and other scientific areas in which the man had an active interest. For the most part, Mr. Cronin has done this portion of his task rather well.

The biography is divided into three books. Book I, The Seed, the Sapling and the Young Tree, deals with the educational phases in the life of the young von Schrenk and in this reviewer's opinion does not meet the standards of the remaining portions of the biography. The facts are there, but the tempo is slow. The vigor characteristic of Mr. Cronin's short stories in *Manhunt*, which this reviewer has enjoyed on many occasions, is missing. Nevertheless, the section does picture the young von Schrenk as the type of student to challenge the serious educator, especially at the graduate level. Book II, The Burgeoning, covers the formative years. It is a period of muscle flexing. The pace quickens and with it, the interest. Book III, The Green Years, portrays the mature von Schrenk, the eager warrior, in action; and here the author is at his best in the treatment of his subject.

In addition to these three books, the biography contains a check list of von Schrenk's publications and two appendices. Both of the latter are reprints. The first, Results in the Preservative Treatment of Railroad Timbers to Prolong Durability, is taken from the *Proceedings* of the American Forestry Congress for 1906; and the second, Annual Address of the President, is taken from the *Proceedings* of the American Society for Testing Materials for 1935. The foreword is by Dr. Henry Schmitz, president emeritus of Washington State University.

von Schrenk was a controversial figure. People who knew him well apparently either liked him or disliked him intensely. Author Cronin, after weighing the available evidence, has portrayed the man as he sees him. The picture is a most interesting one; and if that is the only objective of a biography, Mr. Cronin has been most successful in his efforts. However, in this reviewer's opinion, many readers will be left with a sense of frustration. Frequent mention is made of von Schrenk confounding and confusing his enemies, but too often the issues are neither clearly defined nor the opposition named. The most detailed account concerns an early go-round with Gifford Pinchot, whose personality had much in common with that of von Schrenk. To those who know the reasons for the slugging and infighting, a restatement of the circumstances may not be necessary; but to readers of a later generation, the issues need much greater clarification to give meaning to the conflicts. Another irritation, perhaps minor, is the inclusion of a long excerpt from one of von Schrenk's works in which frequent reference is made to plates not reproduced in the biography. While one appreciates the financial difficulties in reproducing the plates, much of the value of the excerpt is lost without them.

Dr. Henry Schmitz is quoted in the introduction as stating: "In my opinion no man in America had a more profound influence in the wood preserving industry in the early days than did Hermann von Schrenk." This reviewer accepts this evaluation, but he also recalls to mind the many stalwarts who were coworkers with von Schrenk in the field of wood preservation through much of his lifetime. Although this biography of Hermann von Schrenk is not the history of wood preservation in these United States, it is an important contribution to it and is worthy of the attention of those interested in this field.

NEWELL A. NORTON
Head, Department of Wood Utilization, School of Forestry, The Pennsylvania State University

Power to Produce: The Yearbook of Agriculture

Edited by Alfred Stefferud, xiii + 480 pp. Illus. Superintendent of Documents, Government Printing Office, Washington 25, D. C. 1960. $2.25.

Power to Produce is the history of the American agricultural revolution. Nine sections deal with "power," its development and application to farm and home use. Man has had to use energy derived from wind, water, animals, and engines.

"Power in the Past" gives a vivid picture of man's conquest to feed himself and his family. From the early agricultural reports we get an interesting account of the frontier conditions with which early settlers had to contend. They were handicapped by primitive implements, by lack of communication and transportation, and by lack of agricultural knowledge.

"Power in the Present" shows how, with the invention of the reaper in 1831 by Cyrus McCormick, there came a demand for a more constant source of power to harvest

the grain crops.

Forestry took its first progressive step 60 years later when engine power was used in the woods. Alvin O. Lombard of Waterville, Maine, started the manufacture of track-type tractors. The unit was designed especially for transporting lumber and logs over the rough roads in the Maine woods. In the Lake States another track tractor, the Centiped Log Hauler was made by the Phoenix Mfg. Company in Wisconsin.

In 1906 the word "tractor" replaced "gasoline traction engine." The number of farm and garden tractors has increased to about 4,800,000. Also, in the passing of time the two-wheeled cart has been replaced with dozens of different types of vehicles to speed the agricultural revolution. Electric power on the farms has increased from 11 percent in 1935 to 97 percent in 1960.

The third section, "Power on the Land," tells what can be done to remake land, clear it, and prepare it for seeding. Other applications of cheap power are mentioned in specific purposes; such as motors and pumps for irrigation, machines for earth-moving jobs, and rebuilding watersheds. Following the first World War, aircraft was used to patrol for forest fire detection, and for dusting, also for direct seeding.

"Power to Harvest" records the progress in harvesting crops from the use of the frail to the most modern machines. They have reduced the harvest time for nearly all crops grown, processed, and stored on a commercial scale. The real breakthrough came in 1935 with the development of a one-man combine powered by a two-plow tractor.

The efficient logging method of John Calhoun in New Hampshire is described by Forester Simmons. Here, we note the use of chain saw, tractors, and trucks in thinning and harvesting operations that leave the forest in good condition for future growth. He further states that power equipment is manufactured in various sizes for the woods jobs, which include felling, skidding, and hauling. Power saws enable a man to cut two to three times more timber than ever before. Tractors with accessories, such as rear-mounted winches and logging arches, do skidding more efficiently. There is also noted a mobile truck-mounted sawmill that can be driven from farm to farm.

The remaining sections deal with livestock, marketing, and related agricultural topics which are of little interest to most foresters.

C. W. HALL
Clemson Extension Service, Columbia, S. C.

The Vegetation of Wisconsin

By John T. Curtis. 657 pp. Illus. University of Wisconsin Press, Madison. 1959. $7.50.

A much broader field of scientific discipline than the title would seem to indicate is covered in this book. Throughout the text, the reader is taken on many interesting literary "side trips" into such diverse fields of knowledge as geology and ethnology; pedology and archaeology; climatology and methodology. However, this richness of subject matter in *The Vegetation of Wisconsin* is a point of strength which adds immeasurably to its readability and usefulness.

Foresters who work in the Lake States region will find this publication to be of great value both as a library reference and a field handbook. Sixty-six plates and copious diagrams and tables based on plant ecology laboratory studies provide additional substance to the text and the appendix.

One of the key concepts of the book is the idea (page 54) "that vegetation must be studied as a continuous variable." The author uses the term *vegetational continuum* to indicate that the floristic composition of an entire series of communities "gradually changes along an environmental gradient." Curtis also has developed a numerical system called Adaptation Numbers for evaluating "the biological adaptation of a (tree) species toward successful survival in the complex of environmental conditions." High numbers (sugar maple is 10.0) indicate that a species may be expected to persist in the plant community; by inference, a low number (aspen is 1.0) indicates that it is likely to be eliminated by natural competition. Obviously, this classification goes considerably beyond the empirical shade-tolerance ratings which have been made for the more important timber trees of the United States by foresters.

The subject matter of *The Vegetation of Wisconsin* is presented in seven parts comprising 24 chapters, plus a comprehensive appendix. Main headings include Part 1, Background; Part 2, Southern Forests; Part 3, Northern Forests; Part 4, Grasslands; Part 5, Savanna and Shrub Communities; Part 6, Lesser Communities; and Part 7, the Vegetation as a Whole. If the reader is to appreciate fully the intricate and involved relationships between these broad divisions of the state's flora, it is imperative that the book he read from cover to cover.

The principal grounds for disagreement between the author and foresters probably will be in the realm of plant succession. "Going against Nature" finds few advocates among ecologists, yet foresters, like agronomists, must do this to attain the objectives of management. For example, it may be necessary to cut or rogue out balsam fir, white spruce, and tolerant hardwoods on certain upland sites in order to perpetuate white and red pine.

Similarly, the conversion of aspen stands to more valuable species may be hastened by underplanting them with tolerant conifers; northern hardwoods may be clearcut to encourage yellow birch over sugar maple; and northern red oak woodlands may be given seedbed preparation to stimulate the germination of acorns and increase the amount of regeneration. Thus, sound silviculture may modify or even reverse natural ecological trends in order to attain the objectives of forestry. Whether such practices are "right" or "wrong" depends mainly upon one's viewpoint and the economic and social gains and losses that are involved.

HAROLD F. SCHOLZ
Lake States Forest Expt. Sta., Forest Service, U. S. Dept. Agric., St. Paul, Minn.

Meet the Natives

By M. Walter Pesman. 6th ed. 220 pp. Illus. Published by the Author, 372 South Humboldt St., Denver, Colo. 1959. $3 and $3.60.

An apt review of this attractive popular treatise of Rocky Mountain wildflowers, trees, and shrubs is provided by the author in the first paragraphs of the introduction:

"Just between you and me—don't buy this book if you know too much. This is not a book for botanists: for one thing, it tries to identify plants without a microscope; for another thing, it lacks certain botanical niceties, such as . . . the author's designation after the Latin name. This was done after due deliberation; the amateur is interested first of all in the plant itself, not in small details. . . . This may sound like flippancy or disrespect toward the botanists; nothing is farther from my mind. If it had not been for the painstaking work of the botanists this book could not have been written."

The reviewer, passingly familiar with earlier editions (the first in 1942), has found this sixth edition decidedly useful in the field, or even for quick reference in office or laboratory. Beginning botanists, wildflower enthusiasts, and nature lovers generally will find the zonial arrangement and the color key for flowering herbs convenient, and, used with care, reliable in the identification of well over 700 species of plants in the central Rocky Mountain region. For each of the zones—plains, foothills, montane, subalpine, and alpine, and ranging from 4,000-6,000 feet to far above timberline—the treatment is by trees, shrubs and shrubby trees, and herbs, where applicable. The herbs are divided, according to color of flowers, into the following groups: green or brown; red, pink, or reddish-purple; white; blue and bluish-purple; and yellow. The color aid is further extended through the use of hues corresponding to flower color on the edge of appropriate pages, giving the front a "rainbow" appearance and facilitating location. The season of bloom is given for each species. Over 150 of the more conspicuous or striking species are illustrated by pen drawings, and another 50 are represented by photographs. A kodachrome of Maroon Peak and Lake makes an attractive frontispiece.

The book is full of extras: There are descriptions and a classification of life zones, a four-page classification of common weeds "... arranged from tall to small," vines ". . . from mountains to plains," water plants ". . . from showy to humble," a briefly annotated list of references, translation of Latin names, a brief glossary called "... special terms explained," a good index, and a little poetry.

Meet the Natives is acceptably printed on semigloss paper. The drawings are fair to good, and the photographic reproductions are good to excellent. The price, $3 for the regular (paperback) and $3.60 for the "wir-o-bind" edition, is reasonable.

The reader has not far to go to find that this is an unusual and original treatment of the flora of an important region. In the reviewer's opinion it is an "off-beat" worth its price and its modest weight on field trips.

LEE E. YEAGER
Leader, Colorado Cooperative Wildlife Unit, Fort Collins

Publications of Interest

Workers in forestry who make use of the excellent abstract service of the Commonwealth Forestry Bureau will be interested in a recent publication describing the work and growth of that organization. The 28-page bulletin, *A Synopsis of the Work and Growth of the Commonwealth Forestry Bureau, Oxford, 1939-1959*, is available from the director of the Bureau, Imperial Forestry Institute, South Parks Road, Oxford, England. Price 2s. 6d.

• • •

Project Twenty-Twelve, the Bureau of Land Management's statement of program objectives to the year 2012—the 200th anniversary of the Bureau—was submitted to the Congress in late August. Copies of the 64-page report may be secured from the Bureau of Land Management, U. S. Department of the Interior, Washington 25, D. C.

• • •

A limited number of copies of the Proceedings of the Fifteenth Annual Northwest Wood Products Clinic are available from the College of Forestry, University of Idaho, Moscow. The clinic was held in Spokane, Wash., in April 1960 and was jointly sponsored by the Inland Empire Section of the Forest Products Research Society, the University of Idaho, Montana State University, Washington State University, and the Spokane Chamber of Commerce. Price: to clinic members $2.50; to nonmembers $7.50.

Current Literature

Compiled by LOIS MCALLISTER, *Assistant Librarian, State University College of Forestry at Syracuse University*
Range Management Section Compiled by NELLIE G. LARSON, *Library, U. S. Department of Agriculture*

General

Common Forest Trees of New Jersey. By A. N. Lentz. 158 pp. Illus. College of Agriculture, Extension Serv., New Brunswick, N. J. n.d. 50 cents.

The Meaning of Wilderness to Science; Proceedings, Sixth Biennial Wilderness Conference. Edited by David Brower. 129 pp. Illus. Sierra Club, Mills Tower, San Francisco, Calif. 1960. $5.75.

Some Fruits and Nuts for the Tropics. By W. C. Kennard and H. F. Winters. 135 pp. Illus. U. S. Department of Agriculture, Washington 25, D. C. 1960. Misc. Pub. No. 801. 50 cents (Govt. Print. Off.)

United States Department of the Interior—Forest Conservation. By J. F. Shanklin. 86 pp. Illus. U. S. Department of the Interior, Washington 25, D. C. 1960. Conservation Bul. No. 42. 40 cents (Govt. Print. Off.)

Forest Economics

Timber Marketing and Land Ownership in Mendocino County. By Paul Casamajor, Dennis Teeguarden, and John Zivnuska. 56 pp. Tables, charts. Calif. Agric. Expt. Sta., Berkeley. 1960. Bul. No. 772.

Forest Management

Actual Problems in Aerial Survey. By W. Schermerhorn. 30 pp. International Training Centre for Aerial Survey, 3 Kanaalweg, Delft, The Netherlands. 1960. Pub. No. A/B, No. 1, V. 1. 50 cents.

Continuous Forest—Inventory with Punched Card Machines for a Small Property. By R. D. Baker and E. V. Hunt, Jr. 51 pp. Illus. Stephen F. Austin State College, Dept. of Forestry, Nacogdoches, Texas. 1960. Bul. No. 5.

Log Position Volume Tables. By D. M. Fligg and R. E. Breadon. v.p. Tables. British Columbia Forest Serv., Forest Surveys and Inventory Div., Victoria, B.C. 1959. Forest Survey Note No. 4.

Photogrammetry and Photo-Interpretation. (2d ed. of Aerial Photographs in Forestry) By S. H. Spurr. 472 pp. Illus. Ronald Press Co., New York 10. 1960. $12.

Timber Volume Estimates from Aerial Photographs. By G. W. Allison and R. E. Breadon. 25 pp. Illus. British Columbia Forest Serv., Forest Surveys and Inventory Div., Victoria, B. C. 1960. Forest Survey Note No. 5.

Forest Products

Manual, Modern Gum Naval Stores Methods. By R. W. Clements. 29 pp. Illus. Southeastern Forest Expt. Sta., Asheville, N. C. 1960.

Marketing Forest Products from Small Woodland Areas in the Northeast. By N. A. Norton and Others. 53 pp. Tables. Pennsylvania Agric. Expt. Sta., University Park. 1960. Bul. No. 670.

Particle Board from Douglas-fir Bark—Without Additives. By C. H. Burrows. 40 pp. Illus. Oregon Forest Research Center, Corvallis. 1960. Information Cir. No. 15.

Forest Resources

Michigan's Forest Resources. By V. E. Findell and Others. 46 pp. Illus. Lake States Forest Expt. Sta., St. Paul 1, Minn. 1960. Sta. Paper No. 82.

The Timber Resources of Maine. By R. H. Ferguson and F. R. Longwood. 75 pp. Illus. Northeastern Forest Expt. Sta., Upper Darby, Pa. 1960.

Pathology

Decay Resistance of Experimental and Commercial Particle Board. By J. W. Clark. 9 pp. Illus. U. S. Forest Products Lab., Madison 5, Wis. 1960. Report No. 2196.

Illustrated Genera of Wood Decay Fungi. By C. L. Fergus. 132 pp. Illus. Burgess Pub. Co., Minneapolis 15, Minn. 1960. Burgess Life Science Series, Mycology. $4.

Laminated Root Rot of Douglas-fir. By T. W. Childs. 6 pp. Illus. U. S. Forest Service, Washington 25, D. C. 1960. Forest Pest Leaflet No. 48.

Western Gall Rust on Hard Pines. By R. S. Peterson. 8 pp. Illus. U. S. Forest Service Washington 25, D. C. 1960. Forest Pest Leaflet No. 50.

Range Management

Forages for Grazing and Weed Control in Wet Areas of the Columbia Basin. By R. W. Van Keuren, V. F. Bruns, and D. D. Suggs. 12 pp. Illus. Washington Agric. Expt. Sta., Pullman. Aug. 1960. Sta. Circ. No. 374.

Medusahead, Range Menace. By R. E. Higgins and P. J. Torell. 4 pp. Idaho Agric. Exten. Serv., Moscow. Aug. 1960. Bul. No. 331.

Northwest Range-Plant Symbols Adapted to Automatic Data Processing. By G. A. Garrison and J. M. Skovlin. 143 pp. Pacific Northwest Forest and Range Expt. Sta., Portland, Ore. Aug. 1960. Res. Paper No. 35.

The Range Cattle Industry; Ranching on the Great Plains from 1865 to 1925. By E. E. Dale. New ed. 207 pp. Illus. University of Oklahoma Press, Norman, 1960. $4.

A Range Manager Looks at Sandberg Bluegrass and Its Relatives. By A. A. Beetle. 10 pp. Wyoming Agric. Expt. Sta., Laramie. 1960. Range Manageman. 1960. $4.

Silviculture

Forest Site Evaluation in Ontario. By G. A. Hills and G. Pierpoint. 64 pp. Tables, charts. Ontario Dept. of Lands and Forests, Research Branch, Ottawa, Canada. 1960. Res. Report No. 42.

The Natural Regeneration of Eucalyptus regnans. By T. M. Cunningham. 158 pp. Illus. University of Melbourne, School of Forestry, Victoria, Australia. 1960. Bul. No. 1. 25s.

White and Red Pine: Ecology, Silviculture and Management. By K. W. Horton and G. H. D. Bedell. 185 pp. Canada Dept. of Northern Affairs and National Resources, Forestry Branch, Ottawa. 1960. Bul. No. 124. $1.

White Spruce Seedlings: the Growth and Seasonal Absorption of Nitrogen Phosphorus and Potassium. By K. A. Armson. 37 pp. Illus. University of Toronto Press, Toronto. 1960. Forestry Bul. No. 6.

Soil Conservation

The Conservation of Natural Resources. By R. C. Haw. 256 pp. Illus. Faber & Faber, Ltd., London. 1959. 30s.

Streambank Stabilization in Michigan—a Survey. By W. D. Striffler. 14 pp. Illus. Lake States Forest Expt. Sta. and Michigan Dept. of Conservation, St. Paul 1, Minn. 1960. Sta. Paper No. 84.

Wildlife Management

Factors Affecting the Quality and Management of Big Game Winter Range in Colorado. By L. E. Yeager. 29 pp. Tables. Colorado Dept. of Game and Fish, Denver. 1960. Current Report. No. 30.

Wood Technology and Utilization

Brikettering av Bark og Sagflis (*Briquetting of Bark and Sawdust*). By Harald Millstein and Karl Mørkved. 16 pp. Illus. Norsk Treteknisk Institutt, Blindern. 1960. Meddelelse Nr. 14.

Design of Nailed and Glued Plywood Gussets for Lumber Rigid Frames. By J. O. Curtis. 20 pp. Illus. University of Illinois Agric. Expt. Sta., Urbana. 1960. Bul. No. 654.

Interior Paneling Woods and Finishes. By J. B. Sharp. 16 pp. Illus. University of Tennessee Agric. Expt. Sta., Knoxville. 1960. Pub. No. 414.

The Strength Properties of Timber. By F. H. Armstrong. 34 pp. Illus. H. M. Stationery Off., London. Forest Products Res. Bul. No. 45, Great Britain Forestry Commission. 1960. 3s. 6d.

Society Affairs

Officers and Council
1960-1961

CHARLES A. CONNAUGHTON, *President*
U. S. Forest Service
630 Sansome Street
San Francisco 11, Calif.

B. E. ALLEN
Union Bag-Camp Paper Corp.
P. O. Box 570
Savannah, Ga.

WILLIAM C. BRAMBLE
Department of Forestry and Conservation
Purdue University
Lafayette, Ind.

DONALD E. CLARK
U. S. Forest Service
Federal Center, Building 85
Denver 7, Colo.

HENRY J. MALSBERGER, *Vice President*
Southern Pulpwood Conservation Association
900 Peachtree Street, N.E.
Atlanta 9, Ga.

KENNETH P. DAVIS
School of Natural Resources
University of Michigan
Ann Arbor, Mich.

GEORGE A. GARRATT
School of Forestry
Yale University
New Haven 11, Conn.

WILLIAM D. HAGENSTEIN
Industrial Forestry Association
1410 S.W. Morrison Street
Portland 5, Ore.

HENRY CLEPPER, *Executive Secretary*
Mills Building, 17th Street at Pennsylvania Avenue, N.W.
Washington 6, D. C.

SVEND O. HEIBERG
College of Forestry
State University of New York
Syracuse 10, N. Y.

RICHARD J. PRESTON, JR.
School of Forestry
North Carolina State College
Raleigh, N. C.

CHARLES L. TEBBE
U. S. Forest Service
Federal Building
Missoula, Mont.

Report of Council Meeting

Two meetings of the Couuncil were held, on the morning of November 13 and on the afternoon of November 16, 1960. Present were President C. A. Connaughton, Vice President H. J. Malsberger, B. E. Allen, W. C. Bramble, D. E. Clark, K. P. Davis, W. D. Hagenstein, S. O. Heiberg, R. J. Preston, and C. L. Tebbe; together with Henry Clepper, executive secretary. G. A. Garratt was unavoidably absent because of an injury.

Permanent Committee on Registration and Licensing

The Committee on Registration and Licensing of Foresters has asked the Council to adopt a resolution approving and encouraging licensing by the several states. Among other things such a resolution is deemed desirable as a means of informing the public of the professional status of foresters and forestry.

On a motion by Mr. Allen, seconded by Mr. Clark, the following resolution was unanimously approved.

Whereas the Society of American Foresters is a national professional society and includes within its membership only those persons who meet the qualifications established by it, and

Whereas the Society provides leadership for the profession of forestry, and has established a code of ethics to govern the activities of its members when dealing with the public, and

Whereas the Council of the Society at its 1959 meeting recognized the need for national leadership vested in the Society rather than in any other group, in dealing with matters related to registration and licensing and did appoint a 5-man committee to implement this leadership; and

Whereas the registration and licensing of foresters has been initiated by the states of Georgia, Michigan, and Alabama as a means of protecting the public welfare, and is now being studied by more than 25 other states; and

Whereas the Council of the Society does approve and encourage registration and licensing of persons who qualify under state laws satisfactory to the Society and does further recognize registration and licensing as a means of informing the public of the professional status of foresters who engage in the practice of forestry as defined in state laws;

Now, Therefore Be It Resolved that the Council pledges its support and assistance to Sections and Chapters of the Society engaged in the development and strengthening of state laws on this subject;

And, Be It Further Resolved, that the Council does hereby appoint a permanent Committee on Registration and Licensing of Foresters to counsel and advise those states considering such legislation in order to provide a degree of uniformity in the various legislative acts so that the resultant state laws will not be divergent in action and purpose and possibly minimize the over-all beneficial effects of the various state acts concerning registration and licensing;

And, Further, to serve until further notice, the permanent committee shall be appointed,

And any Section or Chapter considering sponsoring registration and licensing legislation is invited to seek the counsel and advice of the permanent committee.

Natural Resources Council

At the Council meeting held May 9 and 10, 1960, appointment of a committee was authorized to review the question of the Society's continued affiliation with the Natural Resources Council of America. Dr. Bramble and Dr. Garratt were designated as the committee and were requested to report at the Council's next meeting.

Making the report for the committee Dr. Bramble recommended that the Society continue its affiliation.

A motion by Mr. Hagenstein to withdraw from NRC, seconded by Dr. Davis, was not carried.

Nominating Committee for 1961 Biennial Election

The Constitution provides that a nominating committee shall be appointed by the President with the approval of the Council, not later than

April 1 of the year in which an election is to be held. It is the duty of this committtee to provide that there shall be at least two candidates presented for the office of President and at least nine candidates presented for members of the Council. It is also the committee's duty to set the date of the election.

The following members were invited to constitute the Nominating Committee for the biennial election of 1961, for officers and Council to serve during the term 1962-1963:

Chairman—Seth G. Hobart, Charlottesville, Va.
William A. Davies, Corvallis, Ore.
Elmer W. Shaw, Ft. Collins, Colo.
Ardie D. Toler, Mobile, Ala.
Lee B. Winner, Shawano, Wis.

Biological Research Award

The Committee on the Biological Research Award (K. P. Davis, chairman; S. O. Heiberg, and C. L. Tebbe) was requested to draw up criteria for the Council's consideration and for the purpose of adopting a policy governing future awards.

The policy, as approved by the unanimous vote of the Council, follows:

1. The broad language establishing the award is sufficient guide and should not be limited by hard and fast rules tending to bind the actions of future Councils. Organizational affiliation should not be a consideration. The basic aim should be to seek out and recognize men who have done outstanding work and to call attention to work valuable in the advancement of forestry within the purview of the award.
2. Suggested practice is:
   (a) The Award Committee should maintain a list of all possible candidates that can be suggested.
   (b) Each year, the Award Committee presents to the Council the names of from 3 to 6 men in recommended order of priority, giving concise written information on each as follows:
      Name, address, age;
      Present title and position;
      Education; academic degrees;
      Employment; major positions held;
      Major publications; books and other writings;
      Honors, awards, or other scientific recognition;
      Participation including membership in scientific, learned, and professional societies;
      Field of research;
      Research accomplishments.

   Additional information that might be added if pertinent:
      Endorsements or negative opinions (originating outside Council);
      Foreign travel or study;
      Special assignments: armed forces, foreign aid, etc.
   (c) Specific consideration by the Council should be limited to the names presented though there is full freedom to suggest names for subsequent consideration.
   (d) How information on prospective candidates is obtained is left to the discretion of the Award Committee.

New Bylaw to Protect Officers and Employees

Since the Society is a nonprofit (not a stockholder) corporation, the probability is unlikely of legal proceedings against a Council member, officer, or employee. However, the complexity of corporation regulations continues to increase. Accordingly, it appears wise to protect Council members, officers, and employees against penalties by providing for indemnification.

On the recommendation of the Finance Committee (B. E. Allen and K. P. Davis) the Council unanimously adopted the following new bylaw.

Each Council member, officer, employee, and his heirs, executors, and administrators shall be indemnified by the Society of American Foresters against any costs and expenses, including counsel fees, reasonably incurred in connection with any civil, criminal, administrative, or other claim to which he might be made a party by reason of being a Council member, officer, or employee of the Society of American Foresters provided he is not adjudged derelict in the performance of his duties; and that he acted in good faith in what he considered to be the best interests of the Society and with no reasonable cause to believe the action was illegal.

Foresters' Safety Creed

A proposed safety creed for foresters was developed in 1959 and submitted to the Division of Education, with which Division the Committee on Safety is affiliated.

The Division in turn referred the creed to the Council for consideration.

W. C. Bramble, a member of the Council and past chairman of the Division of Education, was requested to review the proposed creed and report on it with a recommendation at the spring 1961 meeting of the Council.

New Division of Forest Fire

In 1959 a petition was presented to the Council to authorize a new subject Division of Forest Fire.

A temporary committee was appointed to study the need for and possible functions of such a division, if authorized. This committee (K. P. Davis, chairman) submitted questionnaires to interested members to determine their opinions regarding the proposed division (JOURNAL OF FORESTRY, July 1960, page 578).

Acting for the committee Dr. Davis made a motion, seconded by Mr. Clark, that the Council authorize a subject Division of Forest Fire. The vote was 5 in favor, and 4 opposed.

Mr. Hagenstein then made a motion, seconded by Mr. Malsberger, that the Division of Forest Fire be authorized to hold a full-day meeting (two half-day sessions) at the joint SAF-CIF meeting in October 1961 for the purpose of organizing the Division; and that it is the sense of the Council that Division meetings thereafter be limited to a half day.

The Budget

Society income and expense for the fiscal year 1960 (December 1, 1959—November 30, 1960), together with the proposed budget for the fiscal year 1961, will be published in an early issue of the JOURNAL.

Schlich Memorial Fund Award

W. Mac F. Robertson, editor-secretary of the Empire Forestry Association, London, England, is the honorary secretary of the Sir William Schlich Memorial Fund. He has notified the Society that the trustees of the fund voted to make the 1960 award to the United States in amount of 55 pounds. The Society is the custodian of the awards granted to the United States.

The Council of the Society has accepted the proceeds ($153.83 in U. S. currency), and decided to make no disposition of the money until its spring 1961 meeting.

National Research Council Committee on Pesticides

An *ad hoc* committee of the National Research Council of Washington, D. C., has been set up to study the wildlife and related problems created by the mass distribution of a variety of pesticides. Ira N. Gabrielson, president of the Wildlife Management Institute, is chairman of the committee. Tom Gill is a forester-member.

The committee has recommended that the National Research Council create a central agency to coordinate research programs, to gather information on existing programs, and to point out the gaps to research agencies in this field. A small staff will gather and compile the necessary information. Between $35,000 and $40,000 will be needed.

Contributions have been invited from the chemical industries and from private conservation organizations.

On a motion by Mr. Hagenstein, seconded by Dr. Preston, the Council voted to contribute $250 to the committee.

Future Annual Meetings

Future annual meetings of the Society have been scheduled as follows:

1961—October 8-12. Joint meeting with the Canadian Institute of Forestry. Minneapolis, Minn. Leamington Hotel.

1962—October 21-24. Atlanta, Ga. Dinkler Plaza Hotel.

1963—October 20-23. Boston, Mass. Statler Hilton Hotel.

1964—October 11-14. Spokane, Wash. Davenport Hotel.

For 1965 the Council has been invited by the Gulf States Section to hold the annual meeting in the Section area or in the earliest year thereafter. No action on this invitation has been taken.

For 1966 the Council has been invited by Michigan members resident in the Wisconsin-Michigan Section to hold the annual meeting in Detroit or Grand Rapids. No action on this invitation has been taken.

Visiting Scientists Program

The following resolution was received by the Council of the Society of American Foresters with respect to the Visiting Scientists Program in forestry (JOURNAL OF FORESTRY, August 1960, page 668):

The Council of Forestry School Executives at its meeting in New Haven, Connecticut on November 12, 1960 requested that the Council of the Society of American Foresters be informed of the following actions:

1. It was moved and approved that the Council of Forestry School Executives requests the Council of the Society of American Foresters to request the National Science Foundation to continue the visiting scientists program in forestry for another year;

2. The Council of Forestry School Executives went on record favoring voluntary financial cooperation with the visiting scientists program, each school to contribute in the manner which it chooses.

Dr. Preston further recommended that the executive secretary explore the possibility of making application to the National Science Foundation for a foreign visiting scientists program in forestry. The Council approved the recommendation, with authority granted to the executive secretary and the program adviser, George A. Garratt, to take appropriate action.

Occupational Titles of U. S. Department of Labor

At the joint meeting of the Council and Section delegates on November 13, 1960, the following statement was presented by L. S. Hamilton, delegate from the New York Section.

The classification of occupations in the U. S. Department of Labor's *Dictionary of Occupational Titles* is as follows:

0. Professional and Managerial Occupations
1. Clerical and Sales Occupations
2. Service Occupations
3. Agricultural, Fishery, Forestry, and Kindred Occupations

4, 5, 6, 7, 8, 9. Skilled, Semi-Skilled, and Unskilled Occupations

In singling out forestry along with agricultural and fishery for a special number grade, the implication is that the various grades, such as professional, contain no occupations in forestry (or fisheries or agriculture). This implication is indeed further borne out in more detailed breakdowns.

For instance, under "0" grade, (Professional and Managerial Occupations), there are categories for actors, architects, dentists, many specialty types of engineers, but no mention of foresters. There is a class, entitled "0-35 Natural Scientists" which might be used to cover foresters.

Further, under the "3" grade (Agriculture, Fishery and Forestry) the only classes listed are:

3.90 Forestry occupations except logging.

3.91 Chipper—Face Cutter.

The only forestry occupations which are listed by grade (skilled, semi-skilled or unskilled) are: lumbermen, raftsmen, woodchoppers, log graders, and sawmill occupations.

In view of the use made of this occupational dictionary by guidance workers, and the concern of the Society of American Foresters for professional recognition, it seems important to me that this injustice be corrected. Professional groups in agriculture and fisheries have been asked for support in requesting a revision of this classification. Professor E. W. Foss of Cornell University's Agricultural Engineering Department has been the prime instigator for such a change. He has obtained the support of H. A. Meyerhoff, executive director of the Scientific Manpower Commission. Dr. Meyerhoff is prepared to set up a conference in Washington with the Department of Labor, if sufficient support can be secured for such a change.

I presented this topic for discussion at the last Executive Committee Meeting of the New York Section, SAF, September 14, 1960. The Executive Committee instructed me to bring this topic before the SAF Council and Section Delegates at their joint meeting on November 13, 1960, along with our Section's support for a revision of the occupational titles.

The foregoing statement was referred to the Council. On a motion by Dr. Bramble, the Council instructed the executive secretary to seek the assistance of Howard A. Meyerhoff, executive director of the Scientific Manpower Commission, in obtaining changes in the Department of Labor's classification that will recognize the professional and technical occupational grades in forestry.

Civil Service Standards

Dr. Preston presented the following statement in behalf of the Committee on Civil Service of which he is chairman. The statement was given Council approval. (By way of background, readers are invited to refer to the JOURNAL OF FORESTRY for July 1960, page 579; September 1960, page 715; October 1960, page 837; and November 1960, page 921.)

The Council acknowledges the receipt of resolutions from Sections and other groups expressing concern over new Civil Service qualifications for eligibility to the Forester Examination. The Council is aware of the actions of the Committee on Civil Service in investigating these qualifications as well as the article in the September 1960 JOURNAL by Kenneth Daniels covering these standards. This matter was also thrown open to discussion in the meeting of the Division of Education on November 16, 1960.

The Council will watch the application of the new eligibility standards to see that standards are not lowered.

Sierra Club Newsletter

Mr. Hagenstein called the Council's attention to Sierra Club Outdoor Newsletter of August 22 (Vol. 1, No. 6). This newsletter was distributed at the Fifth World Forestry Congress without the authorization of Congress officials. It was reported that Henry Schmitz, chairman of the Committee on Educational Exhibits, protested to the Club about the distribution of the newsletter, as also did Richard E. McArdle, president of the Congress.

On a motion by Dr. Davis, seconded by Mr. Clark, the Council voted (Mr. Hagenstein abstaining) to send a letter to the president of the Sierra Club expressing disapproval of the distribution of the newsletter at the Congress.

The Society's letter follows, together with the reply of the Sierra Club's president.

SOCIETY OF AMERICAN FORESTERS
Mills Building
Washington 6, D. C.

November 18, 1960

Nathan C. Clark, President,
Sierra Club,
1422 Montecito Drive,
Los Angeles 31, California.

Dear Sir:

I am writing you at the request of the Council of the Society of American Foresters which has just concluded its semi-annual meeting. Over a period of several years this Society was actively involved in planning for the Fifth World Forestry Congress, held in Seattle last August 29-September 10. Because of our participation in the management of the Congress, we had more than a casual interest in all that might further its success, or to detract from it.

One circumstance caused considerable dismay among the several Congress officers who were responsible for the maintenance of good will and friendly rela-

tions among the U. S. and foreign delegates. This was the unauthorized distribution at the Congress of Sierra Club Outdoor Newsletter of August 22 (Vol. 1, No. 6).

There are three aspects of this matter to which your consideration is respectfully invited.

First, the distribution of educational materials was not prohibited; it was, in fact, encouraged. But elementary courtesy should have suggested that the approval of the Congress' executive secretary or his staff should have been obtained in advance. This was not done by the Sierra Club, though other organizations were alert to do so.

Second, the broadcasting at a World Congress—through this newsletter—of a highly controversial issue which is exclusively a domestic problem within the U. S. was of questionable propriety. Moreover, it introduced a note of doubt in the minds of foreign delegates as to the competence with which the United States is trying to manage its natural resources. That controversies exist within the U. S. is not denied nor do we question the Sierra Club's privilege to advance its viewpoints. That this Congress should be used as a forum to emphasize those controversies before the world was, I respectfully submit, in shocking bad taste, as well as an action not attempted by any of the many other organizations whose materials were made available at the Congress.

Third, and perhaps most serious of all, is the effect on foreign nationals by holding up of Algeria and Greece as specific examples of land misuse. Whether or not the allegations in the newsletter are correct is not the point. The point is that the governments of France and Greece were officially invited by the Government of the United States to send delegates to the Congress, and did so. France had a delegation of fifteen. Greece sent six.

The following sentences are quoted from the newsletter. "Today Greece lies barren and eroded, a vivid reminder of man's abuse of the land. Its people must beg for food and fuel to stave off the starvation that plagues this once rich nation."

Kindly consider the effect of such an offensive statement on these delegates—and others—who were in effect guests of the United States.

Yours truly,
HENRY CLEPPER
Executive Secretary

SIERRA CLUB
SAN FRANCISCO, CALIFORNIA

November 21, 1960

Mr. Henry Clepper, Executive Secretary
Society of American Foresters
Mills Building
Washington 6, D. C.

Dear Mr. Clepper:

Thank you for the courtesy of your letter of November 18 concerning the disapproval by council of the Society of American Foresters of the Sierra Club's "Newsletter No. 6" and its distribution at the Fifth World Forestry Congress.

As doubtless you appreciate, every organization whether it be the Forest Service, the Sierra Club, or any other, being comprised of people, has its problems of coordination, interpretation, and multiple perspectives. I can easily see why there is dissatisfaction in having aired to the rest of the world the fact that some serious citizens here do not agree with all things that our government is doing. But that is nothing new to the people of any country concerning those of any other country. It is, in fact, a fine proof that our people are free to speak their minds—even in opposition to their officials. It is an example of democracy at work—the prime value that Americans will spend $46 billions to defend in 1961. Perhaps we should be proud of our freedom and let the rest of the world see that we really have it.

I would like to comment briefly on your third point. The number of American adoptions of Greek children from comparatively rich areas such as Athens, as well as from poverty-stricken provinces like Macedonia, and the communications incidental thereto, show all too conclusively that Greece is, in fact, a barren and poor land.

Having defended our publication in two minor respects, I want to assure you that the sincere and specific objections stated in your letter will be given serious consideration by the officers of the Sierra Club. I am having your letter duplicated so that each officer may see it.

We have received both commendation and criticism for the particular brochure in question. Reasonable arguments and historical data have been presented by both sides to support their assertions. It is interesting to observe that most of the criticism has come from individuals who have vocational interests in the forests, while support has come mainly from volunteer citizens working in their "spare time" and from government officials and employees not responsible for forest policy.

Very Sincerely,
NATHAN C. CLARK
President

Meeting of the Council and Section Delegates

A joint meeting of the Council and specially appointed delegates from the Sections was held in the Sheraton-Park Hotel on the afternoon of November 13, 1960. This was a closed meeting for the discussion of Society affairs. President Connaughton presided; 21 of the 22 Sections were officially represented, in addition to several alternates and invited guests, as follows:

Alaska—Von J. Johnson
Allegheny—R. A. Bartoo
Appalachian—Howard J. Doyle
Central Rocky Mountain—Robert Milodragovich
Central States—Ralph W. Lorenz
Columbia River—Martin L. Syverson
Gulf States—Richard C. Allen
Inland Empire—John R. Milodragovich
Intermountain—James D. Curtis
Kentucky-Tennessee—Thomas F. Ramke
New England—Fred E. Holt
New York—Lawrence S. Hamilton
Northern California—Wesley W. Spinney
Northern Rocky Mountains—Richard T. Marks
Ozark—Harold S. Winger
Puget Sound—Jay Gruenfeld
Southeastern—Donald D. Stevenson
Southern California—
Southwestern—C. R. Merker
Upper Mississippi Valley—F. T. Frederickson
Washington—George Vitas
Wisconsin-Michigan—Robert F. Patton

Communications

At the meeting four scheduled topics were discussed. Topic I was "The Improvement of SAF Communications."

Council Member D. E. Clark, chairman of the Committee on Society Communications, reported that his committee has been exploring SAF communications during the past 10 months, has been assembling information and opinions on the subject, and that special reports on specific aspects of the subject may be distributed during 1961 or later.

William A. Parr, a member of the Committee from the Allegheny Section, reported on "Intra-Society Communications *via* the JOURNAL OF FORESTRY." He suggested that there should be more special articles on Council actions; more articles on the activities of Sections and Chapters; more special articles on national affairs; and in addition, he suggested that the JOURNAL publish more "letters to the editor." In his opinion, in time the national executive office should have regional (field) representatives.

F. T. Frederickson, a member of the

Miscellaneous

Mr. Allen made a motion that the Society prepay the postage on envelopes that return voting members' ballots for the 1961 election; seconded by Mr. Hagenstein. The motion failed to carry.

Mr. Hagenstein and Mr. Clark designated as a committee to study the operation of the nine subject Divisions at the 1960 annual meeting, stated that they have done so and will submit a report within 60 days for the consideration of the Council at its spring 1961 meeting.

A report of the Committee on Ethics (H. J. Malsberger, chairman) will be carried over until the spring 1961 Council meeting.

A report of a special committee (S. O. Heiberg, chairman) appointed to review existing SAF policy statements will be carried over until the spring 1961 Council meeting.

Committee from the Upper Mississippi Valley Section, commented on "Communications between Sections and Chapters." Reviewing the formation of the Chapters, he stated that the 22 Sections now have 80 Chapters; that they have brought the Society and the individual member closer together; that Chapter activities provide opportunities for the development of professional leadership and for the training of future officers of the Sections and the Society; but that these developments have demonstrated a need for better communications at all levels, especially the importance of newsletters in Section-Chapter relationships. He discussed the advantages of a two-year tenure for Section and Chapter officers. He suggested more frequent meetings of Section executive committees, and pointed out that in some Sections the number of Chapters is increasing to the point where Section officers find it difficult to keep up with them.

Charles H. Lewis, a member of the Committee from the Gulf States Section, discussed "Communications between the Society and the Public." He pointed out by examples in the South that the public looks to the Society and the forestry profession to defend the forest industry as part of the private enterprise system when attacked by politicians and others who would take valuable forest land out of production for large reservoirs and other projects. He emphasized the need for foresters to provide information to civic clubs and similar citizens' groups. He concluded that foresters are often deficient in providing information about forestry to the public, and that the Society and the profession need to develop talents in public relations.

Norman Worthington, a member of the Committee on Communications from the Puget Sound Section, discussed some additional considerations on communications. He emphasized that the development of better communications throughout the Society membership should be one of the first duties of the new assistant executive secretary to be appointed by the Council, and that the assistant executive secretary should be made available to help the Sections with local problems and projects. The Sections, he said, are in danger of being engulfed by the Chapters, and pointed out the need to strengthen Section operations. In summary, he said that communications should be a two-way street; that the Sections and Chapters can do a better job of answering mail promptly, and keeping open the flow of information to the national Society.

D. D. Stevenson (Southeastern Section) proposed that the JOURNAL OF FORESTRY publish more information on Section affairs and regional news, and suggested a special "regional insert" in each issue. This proposal was endorsed by W. W. Spinney (Northern California Section). R. W. Lorenz (Central States Section) mentioned that the newsletter "What's Happening in Forestry" and *American Forests* magazine publish more news than the JOURNAL; this point was also made by H. S. Winger (Ozark Section). L. S. Hamilton (New York Section) said more news contributions are needed from the Sections. T. F. Ramke Ky.-Tenn. Section asked for comment on a suggestion by Lloyd Thorpe that the Society publish a monthly magazine, separate from the JOURNAL, providing news and popular articles. W. A. Parr (Allegheny Section) expressed need for the technical JOURNAL, but said the members' desire for more articles of a general nature or articles on national issues should be considered even if it means fewer technical papers in the journal.

In replying to these several items, Henry Clepper noted that while "regional issues" of the JOURNAL are quite possible, they would be extremely costly. A "national" issue would still have to be published as at present to meet the requirements of many subscribers and libraries. The generality of scientific and professional journals do not publish regional issues. Would the members wish their dues increased for this purpose?

Mr. Clepper further pointed out that a separate monthly publication, *Forestry News*, was started by the Society in May 1946. It was terminated in January 1949 for two reasons: (1) in the opinion of the Council its cost outweighed its justification; and (2) because the sources of news from the Sections and elsewhere were drying up, the Council decided to combine it with the JOURNAL.

Shortage of material remains the reason for the limited quantity of news published in the JOURNAL. The editors would gladly publish more authentic news items if contributed by the members, the Sections, or Chapters, and received promptly.

In commenting on Mr. Thorpe's proposal for a separate monthly magazine, Mr. Clepper said that the suggestion departs from the policy of a periodical devoted to the advancement of forestry on the scientific and professional level; that the effectiveness of the JOURNAL as the world's most widely read professional forestry magazine could be seriously diluted; and finally that Mr. Thorpe disregards the important question of how will the additional editorial staff and costs be financed.

H. J. Doyle (Appalachian Section) made a motion (which carried) that each Section chairman appoint a reporter whose specific duty will be to send news items to the JOURNAL.

In summation, President Connaughton asked the Sections to urge their officers and members to send more genuine, timely news to the JOURNAL.

He then suggested a number of topics that the Sections might consider at their meetings. Among them were:

1. Should there be more special issues of the JOURNAL, such as those during 1960 on "Forests and Waters," April; "Alaska Forest Resources," June; "Fifth World Forestry Congress," August? If so, on what subjects?
2. How can more "letters to the editor" be stimulated on topics of professional or Society interest?
3. How can more genuine news items of timely interest be obtained for the editor?
4. Should there be two monthly Society periodicals: one the JOURNAL devoted to technical and scientific articles; the other primarily a news magazine? Are the members willing to pay higher dues to finance them?
5. What are the significant issues which, in the opinion of the Sections, the Society should concern itself with?

Society Policy

Topic II was "The Formulation of SAF Policy, and Action to Implement It."

In introducing the subject, Council Member W. D. Hagenstein warned that if professional foresters fail to take the lead in formulating sound forestry policies, lay groups will. As examples, he cited the current controversies on the proposed wilderness preservation system and the use of pesticides in forest operations. He reminded the group of G. A. Garratt's statement in 1952 that the number one problem facing the profession is forestry policy. Pointing out that forestry is no longer a profession with employment opportunity mainly in public service, he mentioned that one-half the foresters are now privately and industrially employed, and that therefore differences in viewpoint among the diverse groups occur. He urged that the Society should face all issues no matter how controversial, that the members should debate the issues among themselves, and then take stands, legislatively and otherwise. Asserting that lay groups are misrepresenting forestry and the profession, he called on foresters themselves to present the story of forestry. In summary, he suggested more vigorous use of policy statements.

Henry Clepper then reviewed the Society's constitutional provisions regarding the formulation of policy. He mentioned that SAF policies are determined in two ways: (1) by the affirmative vote of at leat 8 members of the Council; and (2) by referendum of the voting membership. Resolutions adopted at an annual meeting of the Society represent only the viewpoint of a majority of the members present; they are not binding on the Society as a whole unless at least one-half the voting membership is present, which is palpably an unlikely possibility. This provision (Article X, Section 2 of the Constitution) can be amended by a two-thirds vote of all members voting on a mail ballot.

He then gave examples of three kinds of Society policies that are still in effect, and explained how they were formulated and how handled. These are:

1. The policy on new schools of forestry. In 1947 the Council recommended against the establishment of new schools of forestry. The policy was reafirmed in 1957. (JOURNAL OF FORESTRY, August 1957, page 609.)

2. The policy on multiple use of forest and other wild lands. This was approved by letter ballot of the membership in December 1947.

3. The policy on wilderness preservation. This was adopted by vote of the Council in 1958 and reaffirmed in 1960. (JOURNAL OF FORESTRY, July 1960, page 577.)

President Connaughton discussed the place of the Sections in policy determination, suggesting that a Section can be more specific than the national Society on local or regional issues, and he would therefore expect more vigorous action at Section than at national level because nationally the Society tends to point directions. He too would not dodge controversial issues.

Jay Gruenfeld (Puget Sound Section) called for an articulate national body on important issues. He proposed that the new assistant executive secretary, when appointed, be stationed in the West.

Martin Syverson (Columbia River Section) also hoped for a western SAF representative who could give service to the western Sections. He filed five resolutions adopted by the Columbia River Section. (These have been, or will be, considered by the Council.)

R. F. Patton (Wisconsin-Michigan Section) mentioned the pressure in Wisconsin for a forestry school as a local policy matter. He proposed more discussion sessions at annual meetings and fewer subject Division meetings devoted to research papers.

H. R. Glascock (Columbia River Section) requested that current SAF policy statements be printed for the information of the membership. (This will be done in 1961 following review and codification by the Council, a project now in process by a committee of the Council of which S. O. Heiberg is chairman.)

Membership

Topic III was "Membership Grades and their Changing Significance." It was opened by B. E. Allen, chairman of the Council Committee on Membership.

He reported that the membership by vote of 3,154 *for* and 641 *against* had approved an amendment to Article III, Section 4 of the Constitution, as follows:

"Affiliate Members shall be persons who have had education in forestry but insufficient to meet the requirements of the Junior Member grade.

"Affiliate Members may be elected to Junior Membership on showing proof of eligibility."

From his study of membership grades during the past year, he believes that the majority of members desire to combine the two grades of Junior Member and Member. He recommended that a ballot be prepared by the Council Committee on Membership for referendum by the membership in 1961.

As regards the procedure for the election of Fellows, Mr. Allen had no suggestions for change at this time. He reminded the group that Section chairmen and Division chairmen are Fellow electors.

Speaking for the Columbia River Section executive committee, M. L. Syverson favored eliminating the Junior Member grade, with annual dues for the Member grade as follows: $9 for the first 3 years; $12 for the next 6 years; and $15 thereafter.

H. J. Doyle (Appalachian Section) mentioned a resolution by the Rappahannock Chapter proposing that the old "Senior Member" grade be reestablished and that advancement to it be based on achievement.

Occupational Titles of U. S. Department of Labor

Topic IV was introduced by L. S. Hamilton (New York Section) who discussed the place of forestry in the U. S. Department of Labor's *Dictionary of Occupational Titles*. He proposed a resolution which was adopted and referred to the Council for action.

A copy of the resolution and the action taken will be found in the report of the Couuncil meeting of November 16 published elsewhere in this issue.

Addenda

Council Member Hagenstein suggested that the Council compile a list of items of national importance and refer them to the Sections with the request that the Sections discuss them and have their delegates report at the Council's meeting in October 1961 for action.

President Connaughton closed the meeting by thanking those present for their participation. He expressed the opinion that it would be recorded as one of the most significant.

Allen H. Mullen, Tahoe Valley, Calif., and Perry H. Merrill, Montpelier, Vt., point out their home towns on a map of the United States. Forty-three states and the District of Columbia and five foreign nations were represented at the Society meeting.

Report of the President

Charles A. Connaughton

On the Sixtieth Anniversary I'm delighted to have the opportunity and privilege of reporting to you on your Society's affairs. Through the years we have grown steadily in members, influence, and prestige. We now have about 13,500 members out of an estimated total of approximately 17,000 qualified foresters in the United States. This is a commendable record but one that can be improved and I ask each member to see that it is.

To make this improvement, I urge that each of you take steps to aid in the recruitment to membership of all eligible foresters. I make this suggestion for the reason that our Society is the single group representing the profession of forestry in this country. As such, we need every eligible person to join in strengthening and understanding our individual and collective professional problems and welfare. Secondly, the strength of our profession depends upon the professional stature and accomplishment of each forester. In this connection, no forester, regardless of how competent, can make his maximum achievement without the professional stimulation such as SAF membership offers. In short, the Society needs a full complement of American foresters as much as each forester needs the Society to insure his own successful operations.

I remind you that each Section has an aggressive committee concerned with membership matters. It has been my observation that these include some of the hardest working and most sincere committees in the Society structure. Also, this is true at the national level where our membership committee, headed by Councilman Ernie Allen, is constantly at work. These committees all solicit your assistance and I urge that you extend it so that during the coming year we'll reach a membership of 14,000 at least.

In connection with membership, you may recall the recent ballot to amend the Constitution. By the vote of the membership an amendment was adopted to provide that Affiliate membership qualification require some academic work in forestry, even if not of full professional calibre. Membership is no longer open on the basis of experience alone. Affiliate members can still be elected to Junior membership on showing proof of eligibility.

During the year we experienced several singular events which I'd like to describe briefly. Of particular interest is the World Forestry Congress held at the University of Washington in Seattle this past September. The chairman of our Committee on International Relations will undoubtedly describe this in some detail. In passing, however, I call to your attention that it constitutes a milepost in American as well as World forestry. The SAF was glad to participate with services extended by the JOURNAL OF FORESTRY, your executive secretary, and by many individual members through their various connections.

In terms of professional advancement, I want to mention briefly the Visiting Scientists Program sponsored by the SAF, with our executive secretary as the director and Councilman George Garratt as adviser. This program is made possible by a grant from the National Science Foundation. This grant will finance visiting scientists to undergraduate and graduate schools to aid in forestry education. All institutions of higher learning that offer a curriculum in forestry are eligible to participate. The program is now being implemented.

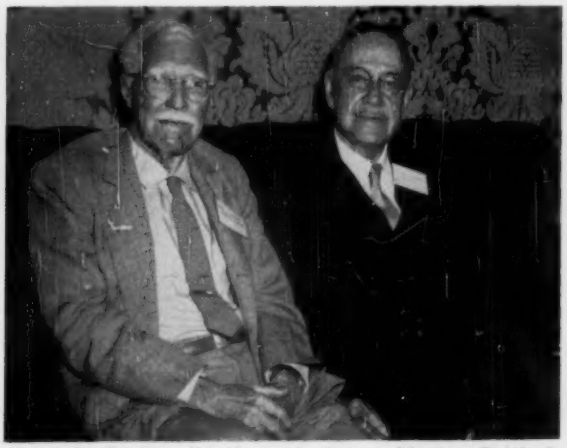
Employment-wise, you will find interest in the survey of professional income, the results of which will be distributed at this meeting. This survey was conducted by a committee under the chairmanship of Paul Dunn with F. H. Eyre acting as secretary. This survey gives us a new base to appraise and understand our professional salary structure.

One of the continuing contributions of the Society in strengthening the professional stature of foresters has been our work in accrediting schools of forestry. During 1960 the revised bases for accrediting were printed and distributed. All educational programs not examined by the SAF in recent years will be examined by July 1961. The revised bases will also be applied to all institutions requesting accrediting examinations for the first time. I remind the membership that our committees on Accreditation have done a tremendous job—tedious and not always pleasant. We, as a group, owe a real debt to these committee members, with Frank Kaufert as present chairman.

During the course of the year, two special publications were released that merit mention. The *World Directory of Forestry Schools* was prepared as a contribution to international progress in professional education. This was a cooperative project with the Forestry Division of the Food and Agriculture Organization for the United Nations. The other is entitled *American Forestry—Six Decades of Growth*. This book, prepared by highly qualified authors, is the only compilation in existence of the history of American forestry in its most important branches since 1900. There is a limited edition of this book and at $5 a copy many members will wish to purchase it. Prompt action to secure your copy is urged.

Our Society has several affiliations

The registration of ladies at the 60th annual meeting of the SAF totaled 267.



Royal S. Kellogg, Florida, and Charter Member Ralph S. Hosmer, New York, each 86 years of age, two veteran members at the 60th annual meeting.

How TD-15 Skid-Grapple loads out 100 mbf daily...with a ONE-MAN CREW!

See how the Little Falls Logging Co. TD-15 Skid-Grapple unloads the rear section of a logging trailer—and positions it fast for recoupling. In addition to the "15," Little Falls also owns a TD-18 Skid-Grapple. "I find both International Skid-Grapples excellent equipment—paying their way by saving two men in each landing," states owner Ed Hampton.

Using the low profile West Coast Special Skid-Grapple and commanding a lift of 18000 lbs., the "15" operator has an easy job of loading the "big ones"! The "15" loads to height of 11'-9", has a forward reach of 5'-9"—to simplify "topping out" high loads.

With a one-man loader "crew," Little Falls Logging Co., Rio Dell, California, loads 100,000 board feet of redwood logs daily—with their International Drott TD-15 Skid-Grapple. And they have reserve capacity to step up their loading rate substantially if they want to!

Their TD-15 Skid-Grapple replaces a boom-type loader that required a 3-man crew!

All five International Drott Skid-Grapple sizes deliver their own special brand of log-loading ease and efficiency. Heart of field-leading Skid-Grapple performance is rugged, logger-developed top grab-arm action. Under feather-touch third-valve control, the Skid-Grapple grips firmly, and releases gently, one big "stick" or several small ones.

"Bear-hug" grip... no damage!

Your Skid-Grapple's log load is under positive control full time. Yet even clamping onto the load with its "bear-hug" grip, the Skid-Grapple does not damage or devalue your logs.

And every International Drott Skid-Grapple has the power, speeds, and go-anywhere crawler traction—for fast maneuverability on all terrain. The TD-15, for example, has the smoothness and wallop of a high-torque, 6-cylinder International Diesel. This nimble rig has a 6-speed full-reverse transmission with "single-stick" shift, and fast Shuttle-Bar forward-reverse control. As this "15's" operator says, "It can lift its load, turn and back up, all at the same time."

Compare Skid-Grapple advantages to any other loading rigs or methods. See for yourself on your own job what it means to command Skid-Grapple capacity, load control, and operator preference. See your International Drott Distributor for a demonstration.

International Harvester Company, Chicago 1, Illinois
Drott Manufacturing Corp., Milwaukee 15, Wisconsin

INTERNATIONAL HARVESTER

INTERNATIONAL®
DROTT

Alumni functions are an important social activity at an annual meeting of the SAF. *Left* to *right*, C. Eugene Farnsworth, John R. Meyering, and Ralph G. Unger, faculty members of the College of Forestry, Syracuse, N. Y.

with other groups which have proven beneficial through the years. This past year one additional connection was made when, on invitation of the National Watershed Congress, the Council moved to make the SAF a participating organization. By so doing, the SAF joins about 25 organizations and groups which support the Congress. This Congress is a forum for discussion of watershed management largely at an annual meeting; it is not an action or program development body.

During the year one particularly important committee has been added to our Society structure. This is a Planning Committee commissioned to look ahead in forestry matters and recommend direction that the Society should take to serve best our professional needs. This committee is meeting for the first time this week. It has no deadline for reporting but is urged to take sufficient time to make a sound, deliberate analysis of future needs with recommendations as are necessary for action.

The committee will face questions, such as: "What will the membership be in 10 years?" "What will be needed to serve this membership in the way of executive offices and officers, publications, and meetings?" "What organizational changes appear to be desirable —do we have enough or too many Sections?" "What is the desirable substructure in the Sections?" "What type of technical subdivisions should we have and should publications be directed at these groups?" "Should the Society policy as set forth in the Constitution and bylaws be adjusted with changing times?"

These are but a few of the type questions which this committee will review. I know that you join me in anticipation of their conclusions and a meeting, such as this, where they can be discussed.

Finally, may I express my real appreciation for the privilege of serving you as President. I have with pleasure attended several Section meetings and have been encouraged in experiencing the evident enthusiasm that exists for the Society and its activities. In my judgment, each year that passes indicates more strongly the need for professional treatment of problems related to forest land use. This Society and its members must step out always and take the lead in demonstrating to the American public that land under management of competent foresters insures productivity. Furthermore, foresters must know how to manage land regardless of ownership so the final product of their work is in the over-all public interest.

We, as foresters, have the problem facing us currently in many localities of adjudicating forest uses in terms of priority in both multiple use and limited use patterns. This process challenges the best judgment we have in meeting and cushioning the attendant and inevitable shocks. We have problems of pesticides to resolve in such a way that public support for sound land use techniques is assured. Also, we have other problems of protection, including fire, that are pressing us in several areas.

These are examples only of the kind of special problems facing us. I do not plan to discuss others as I do not wish to be overlong in this statement. Regardless of whether you are concerned with these or other problems there is need for professional achievement of high order and professional unity in our approach to matters of mutual interest.

In short, our challenges are real and they are specific. The benefits to be accrued from meetings such as this are one way to prepare for them. Let us get on with the meeting then, which I hope will have full participation by everyone.

Report of the Executive Secretary

Henry Clepper

Income during the fiscal year (December 1, 1959 through November 30, 1960) is estimated to be approximately $190,000. Expenses during the same period will total not much more than $181,000. Our net profit for the past year should be between $8,000 and $9,000.

Membership dues continue to be the Society's greatest source of income. For 1960 dues should total about $124,000. The next largest income is from advertising. Gross advertising revenue in 1960 is estimated at $43,000.

Membership as of October 31, 1960 totaled 13,515 by grades as follows: Fellows, 97; Members, 6,380; Junior Members, 4,700; Affiliate Members, 989; Associate Members, 231; Student Members, 932; Corresponding Members, 169; and Honorary Members, 17.

We have approximately one thousand more members as of this date than we had one year ago. But even more significant is the fact that our present membership (13,515) is nearly twice the total (7,100) ten years ago at the end of 1950.

Report of the Editor

The JOURNAL OF FORESTRY was first published under that name in January 1917. It was formed by the amalgamation of the *Forestry Quarterly*, started in 1902 by students of the New York State College of Forestry at Cornell, and the *Proceedings* of the SAF, started in 1905. Thus the publication of professional forestry literature has been an activity of the Society almost as long as it has been in existence.

Until 1950 the JOURNAL was edited by an editor-in-chief, who served gratuitously, and a board of associate editors. The editors-in-chief were without exception men of professional eminence. They were also busy men. During the 1930's and 40's individuals were reporting that the JOURNAL required from 25 to 50 percent of their working time. Furthermore, a rapidly expanding profession was demanding more—not less—in the field of professional literature. The need for paid editorial services was recognized for a good many years before it became financially possible. The services of Albert G. Hall, a consulting forester of this city, were employed on a part-time basis from early in 1950 until September

1952 when an Office of Publications was set up with a full-time, paid editor and his secretary-assistant. (I might add that Mr. Hall was not a candidate for the full-time post.)

This 60th anniversary of the Society ends the first decade when editorial services were employed, and it marks a time when a growing profession with increasing responsibilities must continually subject itself to self-analysis in all its activities.

The editor inherited a good portion but not all of the decision-making responsibilities of the previous editors-in-chief. He also took over all of the routine work of the actual production of the JOURNAL, which had previously been handled by personnel of the Washington office. This excludes advertising and business matters. In other words, two separate editorial functions were combined in one Office of Publications. A board of associate editors continued to advise the editor.

The functions conceived by the Council for the editor included publication of the JOURNAL, other publications of the Society—excluding *Forest Science*—editorial assistance to members, and such collateral duties as might be assigned. It was generally assumed that with a full-time editor opportunity would result for increased staff contact with members at meetings and in the field.

In evaluating accomplishments during recent years in the publications field it is necessary to recognize the time limitations placed upon a small staff by the volume of work involved in the routine of editing an 80-page monthly magazine. This takes about 75 percent of the editor's working time and practically all of that of his secretary. The time element also comes up in the periodic occurrence of deadlines. There are three per month. Either the editor has to be at his desk or else he must relegate his responsibilities in the contents and correctness of an issue. It is pertinent to add that in certain miscellaneous editing jobs we have been fortunate to have the aid of F. H. Eyre during the past four years.

Books

The biggest single undertaking other than publication of the JOURNAL completed during recent years was the *Forestry Handbook*, issued in 1956 by the Ronald Press Co. This has been reported upon in detail before. It is of interest to note that the Society has received royalties to date amounting to nearly $20,000. The many people who had a part in this Society project are to be congratulated.

The editor played a very minor role in getting out the book *Forestry and Related Research in North America* as this was being processed at the same time as the *Handbook*.

In 1958 we issued the third revision of *Forestry Terminology*.

Currently, in commemoration of this 60th annual meeting, the book *American Forestry: Six Decades of Growth* is the work of 28 contributors and your editorial staff.

Bulletins

In 1954 we published "Forest Cover Types of North America" and in 1956 "Forest Practices Developments in the United States." Both were SAF committee reports.

The modest bulletin "Forestry as a Profession" was staff written. First issued in 1956 and subsequently brought up to date three times 16,000 copies have been distributed, at least 95 percent of them at 25¢ per copy.

Proceedings

Since 1954 we have issued proceedings of all annual meetings.

Contributions to Other Publications or Organizations

A portion of the career bulletin published by The American Forestry Association was prepared by our staff. About 20,000 copies have been distributed by AFA.

Articles on forestry have been written for five magazines on request.

I have personally consulted with and advised I do not know how many authors or editors who were producing material on forestry or the profession. This includes annual consultation with the editors of the Department of Labor's "Occupation Outlook Handbook."

Editor as Journal Contributor

Despite the wish to do more along this line, the editor has written only two full-length articles for the JOURNAL. The time required for such undertakings is a major deterrent. But over and beyond this there is the fact that with few exceptions such articles would be reportorial or of a review nature. Probably they are usually best written by individuals participating in the subject or event covered.

The Journal

I am giving major emphasis in this report to subjects other than the JOURNAL OF FORESTRY because of our varied publication activities, the JOURNAL is the only item self-evident to all members. Furthermore, it is an involved subject and only some specific aspect can be dealt with in a brief time. That I have done in previous annual reports. This year I would like simply to offer some general observations.

1. First and foremost the JOURNAL has a long and commendable history on the American scene. It is the world's largest in its field and is international in circulation. Its functions and general nature were originally conceived and developed by some of the best minds in our profession. Total circulation is 15,000 copies monthly.

2. Basically, the JOURNAL is the voluntarily produced work of this Society collectively. The degree to which a small paid staff can materially determine subject matter coverage, either by staff-prepared material or by solicitation, is limited.

3. In its assignment to cover all branches of forestry the JOURNAL is faced with a problem that hardly needs expounding here. It is inevitable that some fields are neglected, others crowded with submissions.

4. The general make-up and departmentalization of the JOURNAL are a compromise to serve as many functions as possible with one publication.

5. Currently the efforts of an employed staff are spread about as thin as they can be.

Extension foresters plan a conference of their group at the 60th annual meeting. *Left* to *right* are Robert R. Davidson, Iowa; Arthur Sowder, Washington, D. C.; Carl J. Holcomb, Virginia; and Richard I. Marks, Montana.

6. Finally, as this Society continues to grow and as the responsibilities of the forestry profession continue to expand I am confident that the profession will shape the JOURNAL to the needs of the future, as they become apparent.

ARTHUR B. MEYER

Report of the Editor of Forest Science

This year's report on *Forest Science* will be brief, for several reasons. First, brevity has been suggested. Second, your new editor is still finding his sealegs. Finally, the former editor and his staff have set a course which has been well logged in previous years and has been substantially held to in the sixth volume.

Paid subscriptions to *Forest Science* have held about constant for the past several years. As of October, there were 1,242. This number may be compared with the average circulation of 2,635 reported for 60 biological journals in a recently published study of the National Science Foundation. The same study reported the average subscription rate for 28 biological journals as $10.40. *Forest Science* is, of course, one of two journals published by our Society, and is not exclusively a biological journal. This brings up the question of subject matter coverage.

Previous reports have called attention to the high content of biological articles in *Forest Science* and have expressed the desirability of broadening subject matter coverage. It is therefore gratifying to be able to report that Volume 6 shows an increase in papers in the fields of measurements-statistics, economics, and products. In compiling the data on which this assertion is based, your editor found it necessary, in several cases, to be quite arbitrary in assigning papers to a particular subject matter category. This seems to be a welcome symptom of the integration of the various disciplines in forestry research.

Publication not only records the findings of research workers; it may also play a constructive role in the shaping of research programs and single studies. Just as statisticians are wont to point out that their discipline is even more essential in design than in analysis of experiments, one may urge that thought be given to the principles of effective communication early in the planning of a study. This is a "positive," but perhaps indirect way of reporting that often the manuscripts which give editors and referees the most trouble reveal defects in defining problems and planning the studies which are more fundamental than ineptness in exposition.

No journal is ever free of the tension which builds up over the backlog of unpublished manuscripts. The contributor tends to view it as an unmitigated evil; it is an obstacle in the path of progress and recognition. The make-up editor takes it a bit less personally, for he is concerned with broader questions; each issue of the journal must have a fairly constant number of pages, and should have a reasonable subject matter balance. The *Forest Science* backlog amounts to just about 2 numbers for Volume 7. This is perhaps a bit large, but not really alarming. It presents the opportunity to use the available pages to the best advantage.

What of the future of *Forest Science?* Forestry and related research is at the start of a period of growth. Does this not portend heavier pressures on media of publication? It is probably not too early to start thinking about how *Forest Science* should meet this pressure. One course is obvious. It is to urge on contributors the utmost economy in the use of words and illustrative matter, consistent with effective communication. The opportunities in this area remain largely unexploited by our graduate schools, as even the most superficial study of dissertations on file or submitted for publication will reveal. The damage is compounded to the extent that thesis-writing habits carry over into the subsequent publications of research workers.

The need for an outlet for longer contributions has been recognized. Although no further manuscripts for *Forest Science Monographs* have been accepted for publication, several are under consideration.

In his final report as editor, Professor Spurr suggested that room should be made for discussions of controversial articles previously published. This will commence with Volume 7; brevity and politeness will be enforced.

In closing, it is a great pleasure to acknowledge the support and forbearance of F. H. Eyre, who has continued with the unglamorous task of getting *Forest Science* in shape for the printer, and to thank the associate editors, editorial advisory board, unnamed referees, and the staff of the Society for their manifold and indispensable help. But most of all, thanks are due to the authors, who month after month, trustingly send forth their brain children into a hostile world peopled with editors, and so make possible our most rewarding venture in scientific publication.

JOHN W. DUFFIELD

Report of the Committee for the Advancement of Forestry Education

The revised "Bases for Accrediting Professional Forestry Education" and Information Forms I and II, which were approved by the Council on November 18, 1959, have been printed. Copies of the revised standards and information forms were sent to all U. S. forestry schools in May 1960. In an August 1960 JOURNAL OF FORESTRY note, the Committee pointed out the principal changes made in the revision and indicated that the new standards would be followed in future accreditation examinations. Also, all accredited forestry schools were notified in May 1960 that the committee planned a general reexamination of all accredited schools by July 1961 to determine conformance with the revised minimum standards.

In April 1960 a Visiting Committee of Dean Ernest Wohletz and Executive Secretary Henry Clepper represented the Society and participated in the accreditation examination of Oregon State College by the Northwest Association of Secondary and Higher Schools. On the basis of the Visiting Committee's report and recommendation of the Committee for the Advancement of Forestry Education, the Council of the Society has recommended continued accredited status for the professional forestry education program of the School of Forestry, Oregon State College. The evaluation made was a routine examination and neither the accredited status of the School of Forestry nor College as a whole was in question.

During the past year the Committee made a preliminary examination of one nonaccredited professional forestry education program and engaged in considerable correspondence with a number of institutions, either actively engaged in developing professional forestry education programs to the point where they may be considered for accreditation or contemplating such development.

The Committee hopes to accomplish by July 1961 its examination of all accredited forestry schools to determine conformance to the revised standards. Visitation by examining committees will be recommended in cases where the information provided indicates that the professional forestry education program may not meet the revised minimum standards.

The Committee is studying a number of proposals for simplification, clarification and strengthening of the "Bases for Accrediting Professional Forestry Education." However, no

major changes are contemplated until the Society's study of professional forestry education in the United States has been completed and the results and recommendations of this study are available.

The Society has been invited by the Middle States Association of Colleges and Secondary Schools to participate in its November 1961 accreditation examination of the State University of New York College of Forestry at Syracuse University; and by the Southern Association of Colleges and Secondary Schools to participate in the accreditation examination of the School of Forestry, Mississippi State University.

What has been presented above is an accounting of the activities and accomplishments of the Committee for the Advancement of Forestry Education. The Committee is not entirely happy with these accomplishments. Its main concern has been with examinations to determine conformance with minimum standards for professional forestry education. The Committee feels that what it has done and accomplished toward the assurance of minimum standards and improving professional forestry education is not enough, but it is probably the maximum that can be expected in terms of time from a volunteer group. The importance of strong and ever stronger forestry education to the profession, which was emphasized by speakers during the general session, and which will no doubt be further emphasized throughout this meeting, is such that providing added assurance that there will be no weakening or dilution should receive added Society attention.

We would like to invite the attention of all Society members and especially of the Council to this problem. The Society through its Council is investing considerable funds and time in tracing the history and development of forestry education through the study of education in forestry and related fields of resources management. Should we not be investing more of our resources, more than can presently be provided by the excellent contributions of our executive secretary and his staff and the time of a volunteer committee, in providing guidance to all schools with professional programs and advising with those institutions with ambitions to enter this field? It is the conviction of this Committee that unless we do so, professional forestry education will not keep pace with the development of forestry and it certainly will not lead such development. This is a problem that affects all Society members and the profession. It is one that will need to be considered by the Council as your representatives.

S. G. FONTANNA, C. M. KAUFMAN,
W. F. MCCULLOCH, ERNEST WOHLETZ,
F. H. KAUFERT, *Chairman*

Report of the Civil Service Committee

Changes in Civil Service qualification standards for determination of eligibility to the Forester Examination as set forth in the announcement of January 6, 1960, raised many questions among the members during the year. A widespread initial reaction to these changes was that they had lowered standards. As a result numerous letters and resolutions were received by your Committee and the Forest Service protesting the changes.

In order to explore these protests and clarify these changes and their effect on standards, your chairman arranged a conference in Washington on February 18, 1960, which was attended by representatives of the Forest Service, the schools, the Council of the Society, and Mr. Clepper, our executive secretary. All schools were notified of the conference and invited to participate.

The thorough discussion and explanation of procedures by the Forest Service personnel at this meeting was most helpful and reassuring. Those attending were convinced that the big problem was to fully inform the membership of the interpretation of the standards and the rating process. Hence it was agreed that the Forest Service would prepare an explanatory article for the JOURNAL and also discuss the changes on the Division of Education program at the Society meeting in Washington. This resulted in the article by Kenneth M. Daniels on "Federal Forester Qualifications" in the September 1960 JOURNAL, as well as the appearance of Mr. Daniels on the program of the Division of Education Wednesday, November 16. Mr. Daniels' paper on "Selection of Personnel for the U. S. Forest Service" will be followed by a question and answer period. Any member having questions is urged to present them.

I also wish to call to the attention of Society members the interchange of correspondence between the Society and the Civil Service Commission which appeared in the October 1960 JOURNAL concerning the Council's request that professional accreditation be a requirement for eligibility to the examination. The thoughtful reply from the Commission pointed out why this was not in conformance with present policy and made the point that requirements for the Forester Examination are considerably more exacting than they are for engineers, in that there are no specific course requirements for the latter.

R. J. PRESTON, *Chairman*

A book, *American Forestry: Six Decades of Growth*, was issues by the Society in commemoration of its 60th birthday. President C. A. Connaughton and Executive Secretary Henry Clepper look on as SAF Editor Arthur Meyer and Paul M. Dunn, one of the book's 28 contributors, examine a copy.

Report of the Committee on State Registration and Licensing

In the past ten months during which the Committee on State Registration and Licensing has been in existence, it has concerned itself with becoming informed as to the status of registration and licensing development in the several states; and with the distribution to the Sections and Chapters of materials and advice that will be of value to them in their discussions and promotion of registration and licensing of foresters.

A poll of the various Sections and Chapters shows a widespread interest in registration and licensing from Florida to Washington, from Louisiana to Minnesota, and eastward to New Hampshire. Equally as important are the areas evidencing little or no interest. These areas are centered principally in the central states farm belt, and the breadth of the Rocky Mountain area from Mexico to Canada. Correspondence received from these two latter areas showed a preponderant lack of understanding as to the reason for registration and licensing. It seemed to be the consensus in these two areas that the principal purpose of registration and licensing is to enhance the professional standing of the foresters, and as one correspondent rather self-righteously said: "Most of

our foresters work in the fields of public forest administration, research, or education where professional status is generally recognized."

There are two errors in this kind of thinking. First, registration and licensing are for the benefit and protection of the public, not to enhance the professional standing of the forester. The professional standing of the forester will come when the public is convinced and assured that the forester is qualified to do the work for which he is employed. The second error comes from the feeling among some foresters that registration and licensing are only for the consultant, or those in private employ. Again, the thinking behind this kind of reasoning is largely based upon the belief that registration and licensing are for the forester's benefit, rather than for the benefit and protection of the public. When it is recognized that registration and licensing are truly for the benefit and protection of the public, then in public land administration, where the public is primarily involved, registration and licensing become of prime importance.

The actual data from the poll showed that sixteen Sections and thirty Chapters of the Society have formally discussed the subject of registration and licensing in their meetings; and that twelve Sections and eleven Chapters have a committee actively working on the registration and licensing of foresters. The activities of these committees vary from a questioning of members as to their interest in registration and licensing, to the drafting of action programs including the writing of legislative bills for the initial establishment of registration and licensing, or the strengthening of laws already in existence.

The latest report shows that registration and licensing bills will be presented at the forthcoming legislative sessions of the states of Florida, Minnesota, New Hampshire, Vermont, Virginia, and Wisconsin. The Columbia River, Puget Sound, and the Kentucky-Tennessee Sections are also drafting bills for their respective states. A bill to strengthen already existing law will be presented in Georgia. At the present time permissive registration and licensing laws for foresters exist in Alabama and Michigan, and a compulsory law exists in Georgia.

In addition to the above mentioned poll, the Committee with the help of the Washington office, has assembled and distributed to each Section and Chapter a packet of materials on registration and licensing including reports and articles concerning licensing reprinted from the JOURNAL OF FORESTRY, copies of the Alabama, Georgia, and Michigan laws, and copies of application forms used in the three states. The Committee members have individually answered numerous queries from Sections and Chapters and several of the members have appeared on programs at Section and Chapter meetings to explain and discuss forester registration and licensing.

In order to strengthen and clarify the position of the Society in matters of registration and licensing, the Committee has submitted to the Council a resolution approving and encouraging registration. Action on this resolution was expected at the meeting of the Council held this past Sunday morning. The decision of the Council was not known at the time this report was written.

Every time registration and licensing are discussed among foresters, certain key questions arise. In an effort to answer these questions once and for all, and to hasten the movement toward more productive action, the Committee has compiled a list of these questions, with answers, which was published in the November 1960 issue of the JOURNAL OF FORESTRY. Reprints will be sent to all Sections and Chapters.

In the forthcoming year the immediate efforts of the Committee will be concentrated on drafting a registration and licensing bill which can be used as a model by Section and Chapter committees. Accompanying the model bill will be a check list of points considered most significant to the adoption of a permissive, or compulsory, registration and licensing law. Inquiries for such information have been received from Section and Chapter committees operating in Minnesota, Kentucky, Tennessee, and Indiana, and from an employers union headquarters in Minnesota.

This latter request probably points up the strongest argument for active and strong participation by foresters in the effort to further registration and licensing. If you and I do not get registration and licensing legislation passed, someone is going to do it for us; and that kind of legislation may not be to our liking.

L. P. BLACKWELL, W. B. DEVALL
T. D. STEVENS, D. C. WELCH
A. E. PATTERSON, *Chairman*

Report of the Committee on Forestry Research

In September 1957 the Council authorized the President of the Society to appoint a standing Committee on Forestry Research charged with the responsibility "to review and study research needs of concern to the Society and to make recommendations to the Council." This action was described in the JOURNAL OF FORESTRY for December 1957. Since this is our first report, you may be interested in some of the events leading to establishment of the Committee.

For several years, the interest of the forestry schools in strengthening research had been becoming more evident through the efforts of the Council of Forestry School Executives. Its Research Committee had been at work studying ways and means of strengthening forestry research. In 1957, the Forestry School Executives brought the subject of forestry research endorsement before the SAF Council. By June 1959, a Forestry Research Committee had been appointed. It held its first meeting in November 1959.

The Committee concluded that the most effective way to carry out its assignment was (1) to determine what sums are now being spent on forestry research in various fields and by whom; (2) to study the emphasis being placed on the most important problems; (3) to determine what areas should be strengthened to meet present and future needs; and (4) to suggest ways in which inadequacies in size of research programs, balance, coordination, participation, staffing, facilities, or other key aspects might be removed.

During the past year, your Committee has begun an inventory of forestry and related research expenditures by federal and state agencies. A questionnaire was devised and circulated to all colleges and universities where research is under way. On the basis of replies, we expect to be able to tabuiate the dollar expenditures at the present time in major subject matter categories such as silviculture, genetics, insects, diseases, etc.—31 categories in all.

We can give you some preliminary incomplete figures on the amount of money spent for forestry research at colleges and universities. Fifty-three of the sixty-six institutions which were canvassed replied to the questionnaire. These schools spent more than $6-½ million during the fiscal year 1959-1960. Of this amount, the twenty-eight accredited forestry schools spent approximately $4 million and other departments at the institutions with accredited forestry schools spent approximately one-half million dollars. This total of approximately $4-½ million spent at institutions with accredited forestry schools is 68 percent of the total forestry research expenditure at colleges and universities. Kaufert and Cummings, in their SAF research report for 1953, reported that the twenty-five accredited forestry

schools spent $1,676,000. In 1959, the twenty-eight accredited forestry schools spent $3,918,000. The latter figure is approximately 2.3 times the former. However, it should be remembered that the increase in actual research is not as great as the dollar figures suggest because of the decline in what the dollar will buy.

Federal forestry research, too, has increased in the past few years. In the 1953 study just mentioned, it was reported that all federally-financed forestry research totaled $9.7 million. We tentatively estimate that this figure has increased to $25 million, or about 2½ times.

You will note our emphasis on the incompleteness of the data collected so far. We plan to finish the inventory of research expenditures during the coming year. We expect some difficult problems will be encountered particularly when we try to determine the very substantial sums being spent by forest industries on research. However, when the inventory of expenditures is completed, we shall begin analysis of research emphasis field by field and determine the needs for the years ahead.

The Committee still has a big job to do. It will be very grateful for suggestions from any Society members who are interested in the subject of research and research needs in forestry.

L. E. CHAIKEN, ROYCE O. CORNELIUS, CHARLES H. DRIVER, FRANK H. KAUFERT, R. H. WESTVELD, GEORGE M. JEMISON, *Chairman*

Report of the Committee on International Relations

This is our final report on the Fifth World Forestry Congress. At each of the last four annual meetings I reported progress on preparations for this meeting. It opened in Seattle on August 29, 1960. Now that the Fifth World Forestry Congress is over, I want to give you a brief appraisal of accomplishments. Over-all, it was a splendid meeting.

First, though, may I say that more than 300 members of the Society worked on committees for two years planning for and carrying out the many details of arranging this international meeting. As chairman of your Committee on International Relations, I am especially grateful to you for this assistance.

In terms of total attendance, the Fifth World Forestry Congress was the biggest ever held. It was the first such Congress to be held in the Western Hemisphere and it exceeded in size all previous ones by about five times. Total registration was close to 2,000, with about one-third from foreign countries.

This Fifth Congress had two main goals: (1) to promote a more rapid interchange of ideas and technical information in the entire field of forestry; and (2) to make a significant contribution to international friendship. I believe we were highly successful on both counts.

Over 200 invited papers were presented in person at the meeting by authors of world renown. In addition, a surprising number of volunteer papers—nearly 250—were presented to the extent that time was available. All of the papers, including discussions of them, and all together totaling about 2 million words, will be published in the *Proceedings* of the Congress. Thus, this grand compilation plus the even greater benefit derived from personal contacts made at the meeting will—without a shadow of a doubt—do much to accelerate international exchange of ideas and of technical information.

The greatest achievement, however, was probably made toward goal No. 2—friendship, both nationally and internationally. Nationally, preparing for and operating the Congress required one of the biggest cooperative forestry efforts of its kind ever undertaken in this country. Members of public and private forestry agencies, of societies and associations, of schools, of industry, all worked together on committees with but one aim—a successful program and meeting. Points of view were exchanged and harmonized. New contacts and better understandings were accomplished. Everyone did his best, subordinating his agency or private interests, in order to promote the over-all success of the Congress. Nationally, then, the side benefits of working together in a spirit of cooperation might well serve the future, not only in forestry activities but in other activities as well.

Internationally, the operations of the Congress, the tours, the local hospitality of the campus and of Seattle—including especially the visits of foreign participants to private homes—did much to create good will and to foster friendship. The truth of this is evident in post-Congress correspondence.

But the highlight of the Congress was the tree planting ceremony. Under title of "International Friendship Grove" I shall now present a film of that important feature. This is its first public showing—in fact, it is not yet complete. Eventually we will have a sound tract for it. Today, I will supply the sound.

(*Note.*—Dr. Harper proceeded to show and narrate an excellent color movie of the planting ceremonies.)

V. L. HARPER, *Chairman*

Special Program on Forestry Education

Editor's note.—The following report on the Society's Study of Education in Forestry and Related Fields of Natural Resources Management was given by its director, Dr. Samuel T. Dana, after which discussion on the subject was heard from the floor. Dean George A. Garratt, who was scheduled to chairman this portion of the Society Affairs session, was absent due to injuries suffered in an automobile accident.

Study of Education in Forestry and Related Fields of Natural Resources Management

During the past year the statistical and historical material obtained from questionnaires, interviews, correspondence, and the literature has been analyzed and is now ready for use in writing the final report. This work was handled by Assistant Director Evert W. Johnson, who returned in July to his position at Auburn University. His services will continue to be available on a part-time basis in connection with further analysis and interpretation of the basic data and preparation of the report.

A few of the tentative conclusions which are beginning to emerge from the study may be summarized in highly condensed form as follows:

Biologically, a forest is an ecosystem in which trees are the dominant form of vegetation. It comprises the totality of plants and animals and the entire environment in which they live. Administratively, a forest often includes treeless areas such as swamps, marshes, bogs, range lands, barren lands, streams, and lakes which are interspersed among the areas where trees are dominant.

For practical purposes, forestry is the management of forests (or forest lands), in the administrative sense, for the continuous production of goods and services for the benefit of mankind. Prominent among these goods and services are wood and other tree products, forage, water, wildlife, recreational opportunities, scenic values,

The SAF study of education in forestry and related fields has been carried forward by (*L* to *R*) Evert W. Johnson, assistant director; Henry J. Vaux, chairman of the Study Committee; and S. T. Dana, director.

scientific values, and meteorological influences. The term "multiple use" merely emphasizes the fact that forestry deals with the management of *all* forest resources.

Range management, watershed management, wildlife management, recreation management, and other managerial activities such as the preservation of scenic and scientific values are, like timber management, an integral part of forestry when used in the management of forests and included lands. Professionally and educationally, they become "related fields" when they deal also with non-forest lands, the management of which requires a different training from that necessary for the forester.

Wood technology, which does not deal with land management, falls in a somewhat different category. Knowledge of the structure and properties of wood, of the influence of environment on structure and properties, of the relation between properties and uses, and of the character and requirements of the chief wood-using industries is necessary for the adoption of intelligent managerial practices by the forester who is concerned with timber production. Wood technology becomes a related field when it goes into these matters in greater detail than required by the forester, and when it deals with manufacturing techniques and processes, with consequent need for a different professional training than that required by a forester.

The training of tomorrow's forester must be strengthened in both breadth and depth. He must have an adequate knowledge of the interrelationships among the many resources of the forest, of their relative values in specific situations, and of the managerial practices that will result in the optimum production of goods and services. He must, in short, be prepared both technically and psychologically to put multiple use into practice in the woods as well as on paper.

If the reference to psychological preparation sounds far-fetched, see how many times during the next week you use "forestry" as synonymous with timber production and utilization. Ask yourself why competence in timber management is the only requirement for the licensing of a forester or for admission to the Society of American Foresters. And ask why the division of the Society which deals only with timber management is labeled the Division of Forest Management, as if the several divisions dealing with other aspects of management were outside the pale of forestry.

Since forestry deals with all of the resources of the forest, the forester must be able to participate effectively in the framing of multiple-use policies and the conduct of multiple-use practices. To do so, there are certain areas, often referred to as "core" requirements, with which he must be familiar. We are not prepared to make any definitive recommendations as to what these requirements should be. As a basis for discussion, however, we suggest, with some trepidation, that as a minimum they should include dendrology, silvics, silviculture, protection from destructive agencies, forest land management in the broad sense of the term, forest economics, and forest policy and administration—in each case with the necessary prerequisities in the biological, physical, and social sciences.

Beyond the core requirements, additional training will be necessary. This training may either strengthen the student's foundation in the various branches of forest land management, or it may emphasize one of these branches such as timber management, watershed management, range management, wildlife management, or recreation management, depending on the interests of the student.

There are, of course, many ways in which courses can be organized to cover the various subjects that should be included in the curriculum, whether required or elective. Forest influences, for examples, might be offered as a separate course, or it might be covered in courses dealing with meteorology, soils, ecology, silvics, and silviculture. Protection against destructive agencies is another example of a subject that might be covered in different ways. We feel that no attempt should be made to bring about uniformity in the various schools. We do not, therefore, plan to recommend specific courses and hours of credit, but rather to indicate in a general way the ground that we feel should be covered in the core requirements, and in a still more general way the additional subjects which should be available for students interested in the various branches of forest land management. It is not necessary that all of these branches be covered with equal thoroughness by all of the schools, some of which may wish to place more emphasis on one or more branches than on others.

Breadth of training must not be emphasized at the expense of depth. With an exploding population and rising standards of living, the pressure for increased production of forest goods and services of all kinds will become greater and greater. With a stationary or shrinking area of forest land, they can be met with even reasonable adequacy only by more and more intensive management. More attention will need to be paid to basic subjects such as tree physiology, genetics, soils, ecology, meteorology, and hydrology. Principles must be stressed, with illustrations of their application but with no attempt to cover a wide variety of specific conditions, the exact duplicate of which the student is most unlikely to meet. Time should not be wasted on facts, figures, and practices which can be easily looked up or which will soon be out of date. All of this will require teaching of a high order.

In addition to technical competence, the forester needs a foundation in the social sciences and the humanities which will help to make him a useful citizen and a well-rounded individual. As a matter of fact, in a profession such as forestry, where the forester is so often a prominent member of the community and has so many business and social contacts with people, a so-called "general" education is a professional as well as a personal asset. The problem is to know which of the innumerable possible courses to select in order to make the best use of the limited time available. Perhaps selection of an inspiring teacher is even more important than the choice of subject. It should also be remembered

that, with competent teaching, special as well as general education can contribute to the basic objectives of all education—to stimulate the student's imagination, whet his curiosity, and help him to think clearly, communicate effectively, develop sound judgment, and discriminate among values.

We do not see how professional education in forestry of the scope and intensity required by expanding horizons, with the necessary prerequisites and complementary coverage in the social sciences and the humanities, can be provided in less than five academic years and a summer session. Whether such a program should lead to a bachelor's or a master's degree is a secondary consideration. It is, however, important to recognize that it does not constitute graduate training in *forestry,* any more than the postbaccalaureate programs in law and medicine constitute graduate training in those fields.

The proposal that the standard professional program in forestry should cover five years is an evolutionary, not a revolutionary one. It has been discussed, usually with general theoretical approval, for at least fifty years. The five year program is now in effect in all of the Canadian schools of forestry. At least five years of college work are required in the United States in some fourteen other professions, the scope of many of which would seem to be considerably less than that of forestry, such, for example, as hospital administration, social work, library science, architecture, pharmacy, optometry, and chiropody.

Obviously a five-year program in forestry cannot be generally adopted overnight. Perhaps, to use a famous phrase, the transition should be effected with "all deliberate speed." That the lengthened program would result in any serious decrease in attendance seems less likely than that the raising of educational standards would attract a larger number of high-quality students—an outcome greatly to be desired.

Graduate training leading to the doctorate is, of course, important for those looking forward to research or teaching, and has greater value for those interested in administration than is commonly recognized. Such training marks the beginning of true specialization in forestry. Its primary objective is the preparation of a scientist, while the primary objective of the professional program is the training of a practitioner.

There appears also to be a definite need by both public and private owners of forest land for a much larger number of forest technicians (subprofessional men) than are now available. They would relieve the professional forester of much routine work that he is now often called upon to do, would increase his efficiency by multiplying the number of hands at his disposal, and would release him for truly professional work. The engineers estimate that for an engineer to operate at full capacity he needs, on the average, about ten technicians. What the ratio should be in forestry, how many schools for technicians are needed, where they should be located, and how they should be administered are important questions to which this study has not been able to give adequate attention.

Training at the three educational levels — technical, professional, and graduate—is by no means finished with completion of its formal aspects. Education is a never-ending process, for which employers (both public and private), and especially the man himself, have a definite responsibility. Schools can give their graduates the right kind of a start; they cannot turn out a finished product.

The whole subject of education is one to which the Society of American Foresters will have to give much and continuing attention. It underlies the effectiveness of the individual in every branch of the profession and in every kind of employment. Educational policies and programs are, therefore, the concern of the entire profession and not of the schools alone.

Take, for example, the single question of a basic five-year professional program. Whether such a program is desirable is a matter on which the judgment of foresters in every line of activity is needed and should be influential. If it is desirable, then the Society of American Foresters must exert leadership in bringing it into being. To this end, it must establish appropriate standards for accreditation, for admission to the Society, and for the official registration and licensing of foresters. It must also help to persuade public and private employers of foresters to support the program by giving preference to graduates from it in the making of initial appointments and in the salary offered.

In conclusion, let me emphasize two facts. The suggestions advanced in this report are tentative and subject to revision. I hope, therefore, that they will elicit many comments, whether oral or written, all of which will receive careful consideration. Secondly, there is nothing definitive or final about the present study. If it provides needed information, stimulates healthy discussion, and leads to constructive action, it will have served its purpose. Times change, new needs appear, old policies and programs become obsolete. In no field is this more true than in education, and in no field is continuing progress more vital.

SAMUEL T. DANA
Director

Presentation of Boy Scout Award to Society of American Foresters

1960 marks the 50th anniversary of the Boy Scouts of America and the National Council is making this jubilee year an occasion to recognize and express appreciation to a small group of organizations which over the years have been of most help in the development of the Scout Conservation Program.

As a member of the National Conservation Committee of the Boy Scouts, it is my pleasure to represent the National Council, its board and its staff, in saying "thank you" to the Society of American Foresters.

Basically, the Boy Scouts of America is not a conservation organization. But, as you know, elements of conservation are a very important part of the total scouting program. Those responsible for the development of this program sincerely believe that every boy should grow into manhood with a solid understanding of the importance of our natural resources, and a sincere conviction that conservation should be a way of life for every American citizen.

Thus, scouting has in the past, and will in the future, look to the professional in conservation and the professional in forestry for guidance and help in keeping its conservation program in tune with the times, and in the active promotion of that program among its more than 5,000,000 boy and adult members.

The Society of American Foresters has always been most gracious in extending such help when it was needed. When the forestry merit badge requirements were first developed in 1911, and pamphlets prepared to help boys meet those requirements, Society members were most helpful, and as the requirements and pamphlets have been kept up to date since then, Society members have been authors of both projects.

Support for the 1954 National Scout Conservation Good Turn did much to make that activity the success it was, and the National Jamborees of 1953, 1957, and 1960 saw Society members in the forefront helping to develop ideas, exhibits and displays, and serving as instructors taking a sound conservation message personally to more

than 150,000 Scouts.

At the local level, Society members work closely with Scout councils from coast to coast helping to set up sound management plans on the half million acres of scout owned land, and in establishing carefully planned forestry demonstration plots and other educational features in camps—helping scouting to achieve its objective of making each camp a conservation laboratory and an example of the very best in good conservation practices.

Charles Connaughton, President of the Society of American Foresters, it is an honor indeed to present to you this plaque and we hope that as it hangs on the wall of the Society office it will let all members know that:

In its Golden Jubilee Year, the Boy Scouts of America gratefully recognizes the Society of American Foresters for significant service to American boyhood through scouting.

FRED E. HORNADAY
Member, National Conservation Committee, Boy Scouts of America

Fred E. Hornaday, The American Forestry Association executive vice president (*L*), represented the National Council Boy Scouts of America in presenting to SAF President Charles A. Connaughton an award in recognition of the significant services of the Society of American Foresters to American boyhood through scouting.

The following reports of Division meetings are confined to their SAF business or affairs aspects. Individual papers presented and talks made will be reported in full in the Proceedings *of the 60th annual meeting of the Society. The* Proceedings, *scheduled for appearance early in 1961, will be mailed to all registrants at the meeting and will be available for purchase from the Society office.*

Report of the Division of Silviculture

The Division of Silviculture met in the Cotillion Room of the Sheraton-Park Hotel on November 15. Approximately 150-200 members were present at all times for both the morning session, presided over by Chairman Jesse H. Buell, and the afternoon session, presided over by Vice-Chairman Paul O. Rudolf. Eight technical paper were presented.

A short business meeting was held and new officers elected for 1961 were Karl F. Wenger, Lake City, Fla., vice-chairman, and Walter Beers, Perry, Fla., secretary. Current Vice-Chairman Rudolf will succeed to the chairmanship for 1961. No other business was transacted.

Reports of the Committee on Forest Tree Improvement, by R. T. Bingham, and the Committee on Natural Areas, by John F. Shanklin, proved of interest to all present. These reports follow.

FRANK W. WOODS
Secretary

Report of Committee on Natural Areas

The Committee on Natural Areas had made a determined effort to make this, the 60th anniversary of the Society, a real banner year.

Liaison Officers

We have strengthened our liaison with the Sections. Dr. Tom Nelson of the Southeastern Forest Experiment Station now represents us within the Appalachian Section. Professor Richand C. Smith of the University of Missouri assumed the responsibility for natural areas within the Ozark Section. Dr. Henry Hellmer of the California Institute of Technology is now active for the Southern California Section. And for the Northern California Section, our old friend to natural areas, Edward N. Munns, is now the liaison officer.

The Puget Sound and New England Sections recently named C. Frank Brockman and Leroy K. Kelley, respectively, as their new liaison officers.

Publications

The Committee published during the year:

"Research on Natural Areas," found in the June 1960 issue of the JOURNAL.

"Natural Area Selection Policy," found in the September 1960 issue of the JOURNAL.

A revised listing of "SAF Natural Areas" by states, found in the November 1960 issue of the JOURNAL. This gives rather detailed information

with respect to each natural area.

Furthermore, the Committee issued during the year a mimeographed listing of approved natural areas by SAF types.

Southeastern Survey

Now for a brief summary of our major achievement of the year. Under a grant from Resources for the Future, Inc., a survey was carried out in the states of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, and Tennessee, with the objective of discovering examples of old growth or virgin forest stands which later might be set aside for permanent preservation within our Natural Area System. The survey was accomplished in two parts: first, a letter canvass and, second, a field survey to ascertain if suggested areas met our natural area standards and to locate additional areas not uncovered through correspondence.

Altogether, 29 areas were found to be suitable as natural areas insofar as forest type characteristics were concerned. An additional 47 areas were located which appear to have great possibilities but need further investigation. These are comprised in part of areas suggested in the course of the survey but not examined by reason of lack of time.

Some 56 forest types recognized by the Society occur in the Southeastern region. Of these, 17 were represented in the approved Natural Area System at the beginning of the survey. Thirteen additional forest types are included in the areas found suitable by this survey, plus 10 areas which require more examination, or a total of 23 forest types altogether. Although the survey more than justified itself, there remains a tremendous amount of work to be accomplished by the Committee to (1) obtain the formal designation as natural areas for those areas definitely recommended for inclusion in our system, and (2) complete the investigation of those areas requiring additional information. We expect to accomplish this in part by calling in our liaison officers for assistance and to form special committees to handle particular areas.

The Committee wishes to recognize formally the excellent work accomplished by F. H. Eyre, who undertook the survey.

Future Needs

We seek to impress you, members of the Division of Silviculture, and through you all members of the Society, with the need for urgency in the continued search for and dedication of natural areas. These days, everybody—and I really mean everybody—is talking about the "population explosion." They are suddenly realizing, 15 years after World War II, that people really have been having children and that when their children grow up there will be tremendous pressures against the natural resources of the nation. One of the greatest of these pressures and of major importance to us is outdoor recreation. And one of the favorite places for locating camp grounds is within the most impressive patch of forest that may be found. In many instances this might be what we term a natural area and the pressure to open it up for the "thundering herd" may be well-nigh irresistible. Thus, it seems to us, there is great urgency to find and dedicate as many suitable areas as quickly as possible. To that end we seek the assistance of every member of the Society.

JOHN F. SHANKLIN
Chairman

Report of Committee on Forest Tree Improvement

Major committee activities during the past year included (1) assembling and publishing a "Directory to Canadian and Foreign Workers in Forest Genetics," and (2) circulating a forest tree seed certification questionnaire plus providing a detailed report thereon.

Almost 125 ten-page questionnaires were circulated and the 77 percent of the recipients who answered from throughout the United States and Canada indicated the following needs and preferences:

1. Foresters are overwhelmingly of the opinion that some form of certification is needed in the next few years (97 percent) and that certification should be voluntary through a private, nonprofit organization (98 percent).

2. Most foresters want provision for certification of origin of "wild" seed (58 percent), of taxonomic identity (65 percent down to variety or cultivar), and of elevation of original source down to 500 feet (65 percent).

3. In respect to existing (October 26, 1959) International Crop Improvement Association's "Forest Tree Seed Certification Standards" 70 to 82 percent of the voters wanted a revision of the various parts as follows:

a. To include forestry agencies among those establishing eligibility of varieties for certification;

b. To include additional classes of seed like "wild" seed from natural stands;

c. To include precollection inspections verifying presence of cones and estimating potential seed yield;

d. To eliminate or relegate to the state standards requirements for stating site index and certain terminology including "off-type" plants and "isolation zones"; and

e. To define progeny testing more adequately.

Our Seed Certification Subcommittee's recommendations were that:

1. We should encourage activity toward certification, but that establishment of certification procedures and standards, particularly enactment of tree seed legislation, should await thorough appraisal of applicable state, regional, or national forestry opinion;

2. The ICIA aims and methods of tree seed certification are generally, but not exclusively, acceptable pending provisions for certifying origin of wild seed and for employment of professional foresters in developing and administering standards;

3. The existing ICIA standards be amended and amplified to conform with needs and preferences expressed above and also to provide for certification of superior inter-specific hybrids as well as for an intermediate class of seed from rigidly selected but as yet untested parents;

4. Any mandatory labeling requirements be held to a minimum; and

5. In the development of any state or regional standards the national and international aspects of certification should be considered carefully.

Once the detailed seed certification subcommittee report is edited and reviewed it is slated for publication in the JOURNAL OF FORESTRY. Meanwhile comments on the preliminary mimeographed report distributed at the annual meeting, or other comments, are invited.

The new (1961-1962) chairman will be Howard B. Kriebel, Ohio Agricultural Experiment Station, Wooster. New (1961-1963) regional representatives will be Paul O. Rudolf (Lake States), Philip C. Wakeley (Southern), Chi-Wu Wang (Northwest), and Robert Z. Callaham (California-Southwest).

PAUL O. RUDOLF
Chairman, Seed Certification Subcommittee

Report of the Division of Forest Products

Approximately 200 members attended the morning meeting of the Division on November 15. Chairman Rudolph F. Grah presided. Speakers representing the major segments of the forest industry discussed the future potential of lumber, pulp and paper, plywood and hardwood. To a large degree, the future for these industries

appears to be a bright one. It can be assured through increased research as well as an aggressive approach to problems such as merchandising.

The following officers were elected to serve during the coming year:

Chairman—Harvey D. Erickson, College of Forestry, University of Washington, Seattle.

Vice-Chairman—Raymond J. Wood, Diamond Match Division, Diamond National Corporation, Cloquet, Minn.

Secretary—Herbert I. Winer, School of Forestry, Yale University, New Haven, Conn.

RAYMOND J. WOOD
Secretary

Report of the Division of Forest Recreation

Forest recreation problems and directions of advance in modern forestry's expanding horizon were reviewed at the Division meeting on November 15. About 450 were in attendance. Chairman William A. Parr presided. Keynote papers by DeWitt Nelson and John Sieker reviewed current situations and called attention to future trends in the paradoxical situation of concurrent problems of congestion and wilderness in the United States today. Fees for use and ramifications of derivative procedures were aired thoroughly.

A panel of representatives of state and federal agencies, private industry, and the public discussed many ramifications of future forest recreation trends. Francis W. Sargent, executive secretary of the Outdoor Recreational Resources Review Commission, was chairman of the panel.

A report by John D. Coffman reminded the group that the Forest Recreation Division was created in 1946, following petition of 107 members to the Council.

The new division was the fourth authorized for the furtherance of the professional affairs of the Society.

Officers for the ensuing year were elected as follows:

Chairman—Henry A. Harrison, Rocky Mountain Region, U. S. Forest Service, Denver, Colo.

Vice-Chairman—Lemuel A. Garrison, Superintendent, Yellowstone National Park, Wyo.

Secretary—Neil J. Stout, New York Joint Legislative Committee on Natural Resources, Manlius, N. Y.

In the discussion period panel members replied to questions relating to sanitation and fees. In camp grounds, with heavy use loads, provision of sanitary facilities meeting health department standards, will probably be required. For wilderness camps there is a possibility of zoning and use of primitive facilities. Fees for ordinary outdoor recreational use such as camping and picnicking probably are inappropriate in most instances but special services requiring investment in special structures and developments may require fee collection to return the cost of construction and operation as a direct charge to the users.

LEMUEL A. GARRISON
Secretary

Report of the Division of Economics and Policy

The Division of Economics and Policy held its annual meeting in the Sheraton-Park Hotel at Washington, D. C., on November 15. Chairman H. R. Josephson presided. About 300 persons attended.

The program differed slightly from that published. Elgin E. McLean and Richard Huff, Equitable Life Assurance Society of the United States, New York, N. Y., presented the paper originally assigned to Eli Ferguson. Robert J. Marty and Henry H. Webster, Northeastern Forest Experi-

PANAMA

For direct seeding of treated Pine Seed we offer

THE PANAMA SEEDER

This handy-to-use tool, weighing only 4 pounds, is designed for Spot Planting of Pine Seed. A metering device is fitted inside the loop on top of the seed tube. At the bottom of the seed tube is a drag shoe. The operation is simple. You simply screw a jar of Seed (1 Pt., 1 Qt. or even a half gallon size Mason Jar) onto the top of the metering device, pull the drag shoe thru the litter to contact mineral soil, pull the trigger to deposit the seed directly on the fresh soil and step on the seed to obtain good contact. Anyone can use it.

Every seed put out will come in contact with fresh soil, your plantings will be well spaced, the seed consumption per acre will be considerably less than the broadcast method, there is no contact between the treated seed and the operator's hands or body and the reduction in the cost of re-seeding your land is tremendous.

On our first seeder for the 1959-60 season a wire brush was used on the metering device. This did not prove entirely satisfactory and has been replaced by a rubber brush.

Write for circular describing the newest of PANAMA's

Tools for Foresters

PANAMA PUMP COMPANY

P.O. BOX 689, HATTIESBURG, MISS.

ment Station, Upper Darby, Pa., joined Carl H. Stoltenberg in presenting the paper assigned to him.

A business meeting followed the program. Officers for 1961 were elected:

Chairman—Ronald I. Beazley, Department of Forestry, Southern Illinois University, Carbondale, Ill.

Vice-Chairman—James G. Yoho, School of Forestry, Duke University, Durham, N. C.

Secretary—Fred S. Hopkins, Jr., Department of Forestry, Iowa State University, Ames.

In addition, John Fedkiw, Pacific Northwest Forest and Range Experiment Station, Portland, Ore., was elected to the Executive Committee for a term expiring in November 1963.

The Division continues, in principle, its policy of elevating the vice-chairman to chairman. This year, however, the chairman was elected from the open membership. G. R. Gregory, the vice-chairman for 1960, had earlier resigned his post upon accepting a temporary assignment with the United Nations in Rome.

The duties of the nominating committee were also discussed. At the 1959 meeting it was proposed that this committee nominate two or more candidates for each office. After discussion it was concluded, however, that a single slate is satisfactory since additional nominations from the floor are encouraged.

HENRY H. WEBSTER, *Secretary*

Report of the Division of Forest-Wildlife Management

An average of 125 members attended the technical session on November 15. Chairman Lansing A. Parker conducted the meeting and Vice-Chairman James P. Gilligan led discussions following each presentation.

Following the technical session a business meeting was held with election of officers. It was agreed that the Division would adopt annual advancement rather than a new slate of officers each two years.

The present officers moved to the following positions:

Outgoing Chairman—Lansing A. Parker.

Chairman—James P. Gilligan, University of California, Berkeley.

Vice-Chairman—Howard A. Miller, U. S. Forest Service, Atlanta, Ga.

Richard J. Costley, U. S. Forest Service, Washington, D. C. was elected as incoming *Secretary*.

It was agreed that the Division would follow through on present studies being conducted by the U. S. F. W. S. on forecasting rodent populations.

HOWARD A. MILLER, *Secretary*

Report of the Division of Forest Management

Chairman Thomas B. Glazebrook presided at the November 16 meeting of the Division.

The morning session followed the printed program except that, in the presentation of paper No. 4, J. S. Barrows handled the complete presentation. Charles C. Buck did not address the group.

The afternoon session was according to the printed program, except that Alan Duhnkrack, U. S. Forest Service, gave paper No. 4 which he called "A District Ranger's Concept of Multiple-Use." This was a well prepared paper and it was enthusiastically received.

The Division elected the following as officers for 1961:

Chairman—Frank D. Irving, Jr., University of Minnesota, St. Paul.

Vice-Chairman—O. G. Traczewitz, International Paper Company, Mobile, Ala.

Secretary—W. T. Doolittle, Drexel Hill, Pa.

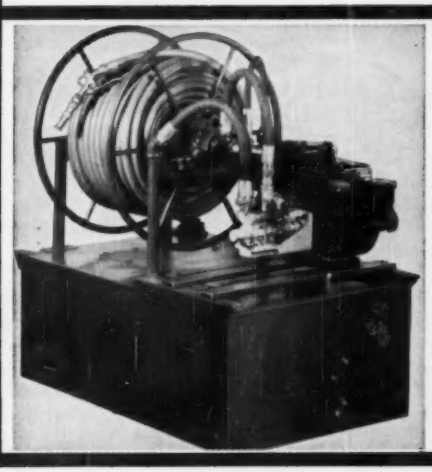
W. J. BRIDGES, JR., *Secretary*

FORESTER
FOREST FIRE EQUIPMENT (Trade Mark)

FIRE FIGHTING OUTFITS

YOUR OWN FIRE "ENGINE," INSTANTLY AT YOUR COMMAND FOR FAST INITIAL ATTACK.

U. S. FOREST SERVICE STANDARD FOR PATROL CARS, 50 GAL. CAP.
(Larger Sizes Available)



This Hard Hitting "One-Man" Outfit Is Adequate For Complete Control When Fires Are Still Small, Also To "Hold" Larger Fires Until Help Arrives.

SIMPLE, RELIABLE, ECONOMICAL

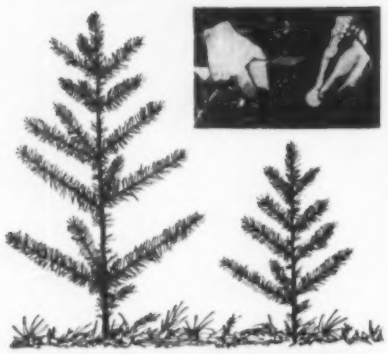
MOUNT IT IN YOUR ½ TON PICKUP IN 15 MINUTES
Leaves ample space and load capacity for "working gear." Ideal for Foresters, Loggers, Patrolmen, Tree Farmers, Ranchers, Construction Bosses and similar field service, during fire season.

Developed in co-operation with the U. S. Forest Service to withstand constant rugged field service, without overloading vehicles. Designed for simplicity in operation and reliable performance. Made of best materials and first class workmanship. Larger sizes 100-500 gallon capacity available.

SEND FOR DESCRIPTIVE BULLETIN

WESTERN FIRE EQUIPMENT CO.
Manufacturers of Forest Fire Equipment
69 MAIN STREET, SAN FRANCISCO 5, U.S.A. *Branch: Portland, Ore.*

THE TREES YOU PLANT



TREATED UNTREATED

GROW FASTER

One **Mora TREEFEED** fertilizer pellet with each seedling you plant, gives you four years' growth in three. Faster growing trees reduce seedling damage, give you a higher survival percentage.

GROW HIGHER

More than 3,000,000 trees planted prove you get a higher tree in less time. Users throughout the country report one **Mora TREEFEED** fertilizer pellet in the planting hole with each seedling will give you more than 40% greater height in four years.

GROW BIGGER

More wood per tree. More profit per tree. **Mora TREEFEED** pellets give you as much as 40% greater diameter. That's profit you can measure. **TREEFEED** feeds the roots of your trees . . . lasts for years.

WITH MORA CHEMICAL TREEFEED

***Mail this coupon to:* MORA CHEMICAL CO.**
2450 6th Ave. S., Seattle, Washington

FOR INFORMATION ON HOW TREEFEED PELLETS INCREASE YOUR PROFITS

JF

Send for **FREE** Information

Name.....

Address.....

City.....*State*.....

Edward Woozley (*right*), director of the U. S. Department of the Interior Bureau of Land Management, presents an American Motors conservation award to Travis M. Tyrell, area forester in BLM's Portland, Ore., office. Mr. Tyrell was cited for outstanding service in the field of forest management of BLM's Oregon and California grant lands in western Oregon.

Report of the Division of Range Management

The Division of Range Management held a meeting on November 16. Robert S. Rummell served as moderator. Merton J. Reed was prevented by illness from attending and his paper was given by John McGuire, Pacific Southwest Forest and Range Experiment Station. The paper of Edwin W. Tisdale was presented by Dean Ernest Wohletz, School of Forestry, University of Idaho.

A short business meeting followed the regular session. Nominations committee Chairman Joe A. Wagner reported the following officers elected for 1961:

Chairman—Charles Terwilliger, Jr., School of Forestry, Colorado State University, Fort Collins.

Vice-Chairman—William D. Hurst, U. S. Forest Service, Ogden, Utah.

Secretary—Lloyd Bernard, U. S. Forest Service, San Francisco, Calif.

LOWELL K. HALLS
Chairman

Report of the Division of Education

The Division of Education convened its 1960 annual meeting at 9:00 a.m., November 16, in the Burgundy Room of the Sheraton-Park Hotel in Washington. Approximately 125 members attended.

After introductory remarks by Division Chairman W. C. Bramble, Moderator John Gray introduced the speakers who in turn developed the theme of "The Proper Role of Extension and Adult Education in Forestry Education." A brief discussion period followed each speaker.

A report by the Division's standing Committee on Safety was presented by Seth Jackson and its acceptance voted by those in attendance.

Nominations were received for the Division office of secretary for 1961. Dr. Harold E. Young was elected to this position. It was then moved and voted that the secretary cast a unanimous ballot for the following who will be the Division officers for 1961:

Chairman—John Carow, University of Michigan, Ann Arbor.

Vice-Chairman—Allen W. Goodspeed, West Virginia University, Morgantown.

Secretary—Harold E. Young, University of Maine, Orono.

Following the election of officers a report and discussion on U. S. Forest Service recruitment procedures and policies continued until adjournment at noon.

ALLEN W. GOODSPEED, *Secretary*

Report of the Division of Watershed Management

Chairman Jack Rothacher opened the tenth annual meeting of the Division of Watershed Management at 2:00 p.m., November 16, 1960.

Officers were announced for 1961:

Chairman—Paul J. Zinke, University of California, Berkeley.

Vice-Chairman—Percy B. Rowe, University of Arizona, Tucson.

Secretary—Richard B. Marston, Central States Forest Experiment Station, Columbus, Ohio.

The Division program was a symposium on the subject "Watershed Management's Expanding Action Program." Dr. Harold G. Wilm served as moderator during the first three papers but, because of travel commitments, asked Herbert C. Storey to moderate during the last three papers.

The program was conducted as scheduled except that the paper "Watershed Management in Action in the Pacific Southwest" by W. S. Hopkins of the Pacific Southwest Forest and Range Experiment Station, was read by Keith Arnold. The burning of the Sam Dimas Experimental Forest on July 29, 1960 and the emergency research program started immediately thereafter were made known to the group.

Attendance at the meeting was approximately 250. No business meeting was held and the nominating committee named Richard B. Marston as secretary for 1961.

PERCY B. ROWE, *Secretary*
By A. L. MCCOMB, *Acting*

Coming Events

Southeastern Section

The Southeastern Section will hold a meeting January 12-13, 1961, at the Robert Meyer Hotel, Jacksonville, Fla.

Washington Section

A dinner meeting of the Washington Section will be held January 19, 1961, at the YWCA, Washington, D. C., and an all-day indoor meeting will be held February 16, 1961, the place to be announced.

Inland Empire Section

The Inland Empire Section will meet January 28, 1961, in Spokane, Wash.

Allegheny Section

The Allegheny Section will meet February 9-11, 1961, at the Lord Baltimore Hotel, Baltimore, Md.

American Society of Range Management

The American Society of Range Management will hold its 14th annual convention in Salt Lake City, Utah, January 31-February 3, 1961.

SPCA Annual Meeting

The annual meeting of the Southern Pulpwood Conservation Association will be held at the Roosevelt Hotel, New Orleans, La., February 7-8, 1961.

American Pulpwood Association

The American Pulpwood Association will meet February 20-24, 1961, at the Roosevelt, Hotel, New York City.

Fred W. Besley (1872-1960)

Fred W. Besley, 88, of Laurel, Md., who for 36 years had served as state forester of Maryland, died November 8, 1960.

Born February 16, 1872 in Vienna, Va., he received an A. B. degree from the University of Maryland in 1892. He was a public school teacher and principal during the period 1892-1900, and a student assistant in the old Bureau of Forestry, U. S. Department of Agriculture, during 1901-1902.

Entering the Yale University School of Forestry he received the M. F. degree in 1904, then returned to the Bureau of Forestry.

He was appointed state forester of Maryland in 1906. In 1912 he received the Sc.D. from the University of Maryland. On his retirement in 1942 he held the record for continuous service as a state forester, having served for 36 years.

In commenting on his tenure of office, several years after his retirement, he wrote, "From the beginning of my administration I took seriously the mandate in our organic forestry act that he (the state forester) shall have direction of all forest interests and all matters pertaining to forestry within the jurisdiction of the state. The result has been a well-rounded program and friendly relations with other state departments and their full cooperation. As I look back over the nearly 36 years in organizing and directing the Forestry Department through both Democratic and Republican administrations, there are at least a few things that stand out in retrospect. The political independence of the Department was maintained throughout the entire period. This was not always an easy matter. Under the law forest wardens have to be commissioned by the Governor. This gives them added dignity and prestige but invites political strategy. The saving clause is that only men recommended by the State Forester are eligible for appointment. Thus we have been able to secure high-type men. The technical personnel is under a state merit system and not subject to political influence. I have always had the final selection of the employees, both technical and nontechnical. High standards of service were maintained resulting in respect for, and confidence in, the Department."

He had been a member of the Society of American Foresters for 52 years. In 1940 he was elected a Fellow. He was treasurer of the Society during the period 1922-1924; chairman of the Allegheny Section in 1927; and a member of the SAF Council for three terms, 1934-1937.

In addition, Dr. Besley was president of the Yale Forestry School Alumni Association, 1925-1926; president of the Association of State Foresters, 1925-1926; a director of The American Forestry Association; and a member of numerous state and federal boards and committees.

Ben Meadows
recommends
THE
BLUME-LEISS
ALTIMETER

Be right—with your Tree Height!

And this means 100% right 100% of the time when you use the Blume-Leiss Altimeter, offered exclusively in this country by the Ben Meadows Company.
Manufactured by one of West Germany's leading optical houses, the Blume-Leiss is a precision instrument of amazing accuracy. Simply by utilizing its special features you eliminate all guesswork in determining the height of a tree.
For this purpose four scales are provided—for trees up to 180 feet high. An additional scale is for measuring degree of slope—with a slope correction table right on the instrument.

For accurate tree heights, use Blume-Leiss!

For determining tree heights directly in feet, the Blume-Leiss has four scales—an additional one for slope correction.

Without range finder (No. D-242A), $38.45
With range finder (No. D-242), $58.60

The
Ben Meadows
Company
315 Pharr Rd., N.E. Atlanta 5, Georgia

After his retirement as state forester, he acquired timber holdings in Maryland, managing them through Besley and Rogers Forest Land Company.

Theodore F. Breon (1906-1960)

Theodore F. Breon, 54, county forester, Carroll County, Conway, N. H., died of a heart attack on November 12, 1960.

Born October 3, 1906, in Altoona, Pa., he was a 1929 forestry graduate of Pennsylvania State University.

He went to Conway as county forester in 1942. He had worked with the Resettlement Adminstration, Tennessee Valley Authority, and in timber salvage work in New England following the 1938 hurricane.

Hugh Curran (1875-1960)

Death has taken the Grand Old Man of tropical forestry.

On October 3, 1960, Hugh Curran died at the age of 85. Fellow of the Society of American Foresters and charter member of the International Society of Tropical Foresters, he had been an outstanding figure in forestry in both hemispheres. One of that very early group of American foresters who went to the Philippines shortly after the American occupation he helped organize the Philippine Forest School which was later to become the College of Forestry of the University of the Philippines.

As an associate professor, he taught tropical forestry there, specializing in botanical collection and silviculture. Subsequently he served as a forester under the Philippine Bureau of Forestry and was imprisoned by the Japanese during their occupation.

In 1920 he was appointed lecturer on South American forests at the Yale School of Forestry.

In his later years Curran was employed by the Forestry Department in Venezuela where he remained until age and ill health forced his return to the United States.

Curran carried the best traditions of forestry into many lands and up to the very year of his death he had far-reaching plans for the development of tropical forest regions, especially the forests of the Amazon Basin.

More than any tropical forester he captured the imaginations of the men who worked with him and the tall, spare, and bearded figure has become a legend in the tropics of the East and of South America. A dynamo of restless energy, neither the years nor illness slowed him down until the very end. The tributes of the men who studied under him and who worked with him bear eloquent testimony to the regard and admiration of the forestry profession.

He loved the forests and could never tolerate long hours at a desk. He had little patience for writing and the harvest of his vast and varied experience will never be garnered in any publications.

Curran lived to see an ever increasing number of foresters follow the trail to foreign fields that he and a few others had blazed more than half a century ago. He welcomed these newcomers, helped them, and looked forward to the time when their influence would be felt throughout the faraway places of the world. American forestry will be well served indeed if those who follow him bring to their work something of the integrity, courage, and unquenchable faith of Hugh Curran. T. G.

James J. Goulden (1904-1960)

James Jepson Goulden, 56, of Norris, Tenn., died of a heart attack on November 3, 1960, while marking timber for sale on his personally owned woodland in Tennessee.

Born May 22, 1904, in Luzerne County, Penna., he was a 1928 graduate of the old Pennsylvania State Forest School at Mont Alto.

During the following year he was district forester for the State of West Virginia, then went with the Florida Forest and Park Service, becoming assistant state forester in charge of fire control.

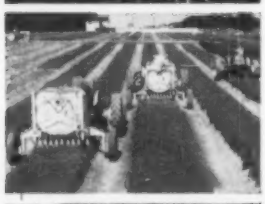
In 1934 he joined the Forestry Relations Department of the Tennessee Valley Authority, remaining with TVA until his resignation several years ago to become associated with Development and Resources Corporation in its foreign operations.

His death occurred on the eve of his departure for Iran to take up the post of adviser to the Shah on resources development.

Arthur W. Jensen (1927-1960)

Arthur Walter Jensen, 33, of Alexandria, Va., was killed in an airplane crash in Montana on October 28. He was in the Division of Fire Control in the Washington, D. C., office of the U. S. Forest Service, assigned to the development of fire fighting equipment.

Born in Chicago, Ill., on March 12,



from
Seed to Seedlings
No Effort is Spared
in producing
MUSSER QUALITY TREES

Careful Selection of seed with good heredity characteristics – Scientific Culture in the nurseries – New Techniques in fertilization, spraying and handling – The Most Modern Equipment, some especially built for particular work – combined with trained and experienced personnel and large volume production enable us to give you the highest quality stock at the lowest possible price.

A FEW OF THE MANY ITEMS LISTED IN OUR CATALOG

			per 1000
AMERICAN RED PINE—*Fine Timber*			
2-yr. Seedlings	(2-0)	3-6"	$20.00
3-yr. Seedlings, root pruned	(3-0)	8-14"	40.00
AUSTRALIAN PINE—*Timber Species*			
3-yr. Seedlings, root pruned	(3-0)	8-14"	35.00
WHITE PINE—*One of the best timber species*			
2-yr. Seedlings	(3-0)	3-6"	20.00
3-yr. Seedlings, root pruned	(3-0)	5-10"	40.00
PONDEROSA PINE—*Fast growing*			
2-yr. Seedlings	(2-0)	3-6"	25.00
NORWAY SPRUCE—*Fast growing*			
2-yr. Seedlings	(3-0)	5-10"	35.00
3-yr. Seedlings, root pruned	(3-0)	10-18"	45.00

Many other Evergreens, Hardwoods, Ornamentals, Shade Trees

Write for Catalog.. Wholesale Price Lists and Christmas Tree Growers' Guide.

*20 MILLION TREES A YEAR!
*NOW OVER 35 MILLION!

MUSSER FORESTS BOX 26A INDIANA, PA.

1927, Mr. Jensen studied forestry at Iowa State College and was graduated in 1951. His studies were interrupted in 1945 for service as an aviation cadet in the Navy.

Following employment with the U. S. Forest Service during three seasons as a smoke jumper, he entered the Service as a specialist in fire control. He had assignments in Albuquerque, N. Mex., and Berkeley, Calif., before his appointment to the Washington, D. C., office.

Lewis M. Turner (1898-1960)

Lewis MacDonald Turner, 62, for the past 16 years dean of the College of Forest, Range and Wildlife Management at Utah State University, Logan, died suddenly on November 4 of a cerebral hemorrhage.

He was born September 7, 1898, in Heyworth, Ill. Following two years of forestry at the University of Michigan, he studied biology at the University of Illinois receiving the B. S. degree in 1923 and an M. S. in botany in 1925, and a Ph.D. in plant ecology from the University of Chicago in 1931.

During the first World War he served as an instructor in the Army, and subsequently was a lieutenant in the Infantry Reserve.

For two years he had been head of

LEWIS M. TURNER

the Biology Department of Blackburn College (Illinois). Then after teaching forestry at the University of Arkansas for seven years, he joined the U. S. Forest Service in 1937 at the Southern Forest Experiment Station, New Orleans. In 1940 he was transferred to the Branch of Research at Washington, D. C. on flood control surveys.

Appointed dean of the College of Forest, Range and Wildlife Management at Logan, Utah, in 1944 he served the institution continuously until his untimely death.

Dr. Turner also was on two assignments for the U. S. Operations Mission in Iran where he helped establish a school of forestry.

He was a member of numerous scientific societies and academies of science, and had been a Member of the Society of American Foresters since 1937. He was a former chairman of the SAF Intermountain Section; had served on the Committee on Civil Service; and had been chairman of the Program Committee for the 1958 national meeting in Salt Lake City.

Wisconsin-Michigan Section Honors Fred Wilson

Fred G. Wilson was recently presented with the first distinguished service award to be made by the Wisconsin-Michigan Section of the SAF. The presentation was made at the banquet during the Section fall meeting. Mr. Wilson was honored for his outstanding contribution to Wisconsin forestry and the esteem with which he is held by foresters throughout the nation.

Some 175 SAF members were present at the Section's two-day meeting held September 23-24, 1960, at the Trout Lake Headquarters of the Wisconsin Conservation Department. Theme of the meeting was "Fifty Years of State Forestry."

New York Section Meets

About 80 members of the New York Section of the Society of American Foresters gathered at Massena, N. Y., on September 15 and 16 for the Section's annual summer meeting. The theme of the two-day meeting was "Forest and Recreation Management in the St. Lawrence River Valley."

The group inspected the St. Regis Paper Company Tree Farm at St. Regis Falls, N. Y., to observe a selective cutting in red spruce. The group also had an opportunity to see a bombardier in operation on a mechanized pulp job. Visits were made to county plantations that were thinned by welfare workers and to private plantations that were thinned commercially.

The final day featured a visit to the St. Lawrence Seaway power dam and locks, to Barnhart Island State Park Development, and to Wilson Hill Game Management Area.

LITTLE BEAVER

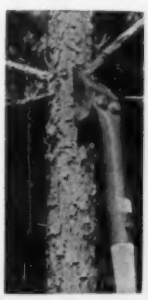
ONE MAN—KILLS 10 ACRES PER DAY

The Little Beaver Tree Girdler is the most economical means of killing trees of all types, sizes and shapes. In use for the past five years by the majority of the large timber growers and the U.S. Forest Service. Use this proven machine in your T.S.I. operations as thousands of others have.

KILL CULL TREES
THE LITTLE BEAVER WAY

HAYNES
Pine Tree Pruner

- Four edge cutting tool
- Only a light stroke required to clip limbs up to 1½ inches.
- Different length handles for all pruning stages.



PRECISION BUILT
SIMPLE TO OPERATE

See your dealer or write
HAYNES MANUFACTURING CO.
LIVINGSTON, TEX.

BAND, NUMBER, LETTER, WRITE OR SPOT TREES OR LOGS EASILY

Nelson
AERO-SPOT

The only Aerosol can with real tree marking paint. Long lasting durable paint for CFI work, boundry, seed tree and other special marking. Choice of nozzels and colors.

Try it! Order today or write for further information

THE NELSON COMPANY
Iron Mountain, Michigan (Box 349)
Montgomery, Alabama (Box 1892)

Membership Applications and Advancements

Proposals for admission, advancement, and reinstatement received in the Society office during the month of November are listed below.

Action on the eligibility of those proposed for membership as listed below will be taken by the Council as of January 31, 1961.

Communications from the voting members regarding the membership eligibility of these persons should be received in the Society office prior to that date.

Alaska Section

Member Grade

Galloway, F. L., Asst. Ranger, USFS, Seward, Alaska (Junior 1954).

Allegheny Section

Student Grade

PENNSYLVANIA STATE UNIVERSITY

Mihalic, G. F.

Junior Grade

Douglass, R. W., Soil Scientist, USFS, Elkins, W. Va. Pa. State, BSF, 1956.

Losensky, B. J., Instructor of Forestry, Pa. State Univ., Mont Alto, Pa. Pa. State, BSF, 1959.

Member Grade

Biser, D. B., Resources Analyst, Md. State Dept. of Economic Dev., Baltimore, Md. (Junior 1954).

Deemer, R. D., Asst. Ranger, USFS, Marlinton, W. Va. (Junior 1954).

Dyke, S. H., Forester, Land Acquisition & Mgmt., Salisbury, Md. (Junior 1954).

Geertsema, G., Forester, W. Va. Cons. Comm., Martinsburg, W. Va. (Junior 1954).

Kemp, G. R., Asst. Dept. of Regional Parks, McKees Rocks, Pa. (Junior 1953).

Parslow, D. F., Forester, USFS, Elkins, W. Va. (Junior 1954).

Saboites, C. J., Asst. Ranger, USFS, Parsons, W. Va. (Junior 1954).

Shattuck, R. D., Forester, Titusville, Pa. (Junior 1954).

Thorpe, R. R., Forester, Pa. Dept. of Forests & Waters, Huntington, Pa. (Junior 1954).

Van Devender, I. G., Self-employed, Elkins, W. Va. (Junior 52R55).

Vanidestine, W. F., Dist. Forester, Pa. Dept. of Forests & Waters, Fayetteville, Pa. (Junior 1954).

Vorselen, A. L., Forest Supt., W. Va. Cons. Comm., Panther, W. Va. (Junior 1954).

Wiles, F. L., Dist. Ranger, USFS, Parsons, W. Va. (Junior 1954).

PLEASE SAY YES TO
THE NEW MARCH OF DIMES
NF
THE NATIONAL FOUNDATION

Appalachian Section

Student Grade

DUKE UNIVERSITY

Cost, N. D. — Gelbert, D. H.
Fox, G. E. — Webb, D. A.

NORTH CAROLINA STATE COLLEGE

Henderson, G. C. — McMillan, E. L.
Workman, D. D.

Junior Grade

McClary, J. E., Cons. Forester, W. Va. Pulp & Paper Co., Covington, Va. (Affiliate 1958).

Patric, J. H., Research Forester, USFS, Franklin, N. C. (Affiliate 1957).

Rankin, J. R., 4506 Country Club Road, New Bern, N. C. (Reinstatement).

Member Grade

Crockett, J. M., Forester, W. Va. Pulp & Paper Co., Summerville, S. C. Duke Univ., MF, 1954 (Junior 1954).

Furney, J. E., Rt. 1, Jamesville, N. C. (Junior 1954).

St. John, C. H., P. O. Box 1559, Wilmington, N. C. (Junior 1954).

White, B. B., Rt. 3, Box 218, New Bern, N. C. (Junior 1954).

Zingelmann, W. H., Continental Timbers, Inc., Morehead City, N. C. (Junior 1952).

Affiliate Grade

Heard, J. A., Forester, P. W. Plumly Lbr. Corp., Winchester, Va.

Louis, F. W., Service Forester, State of Va., Div. of Forestry, Tappahannock, Va.

Wright, Z. D., Woodland Supv., Dimension Timber Co., Sumter, S. C.

Central Rocky Mountain Section

Junior Grade

Carr, V. L., Asst. Ranger, USFS, Sheridan, Wyo. Colo. State, BSF, 1958.

Associcate Grade

Thatcher, T. O., Prof. Colorado State Univ., Fort Collins, Colo.

Central States Section

Student Grade

PURDUE UNIVERSITY

Arthur, J. E. — Fitzgerald, W. E.
Cox, J. T. — Mitchell, D. E.
Worthington, H. K.

Member Grade

Sester, J. A., Farm Forester, Hillsboro, Ill. (Junior 1953).

Columbia River Section

Student Grade

OREGON STATE COLLEGE

Boyd, W. F. — Herrmann, J. P.
Dano, H. C. — Lawler, T. A.
Edwards, R. L. — Norris, L. A.
Gary, G. B. — Weaver, L. D.

Junior Grade

Gossett, L. S., Dist. Eng., USFS, Corvallis, Ore. (Reinstatement).

Hess, H., Forester, U. S. Dept. of Interior, Medford, Ore. Colo. State, BSF, 1956.

Member Grade

Rogers, J. L., Staff Asst., USFS, Prineville, Ore. (Reinstatement).

Affiliate Grade

Kowalewski, M., Forester, U. S. Dept. of Interior, Medford, Ore.

Sund, R. S., Forester, J. H. Baxter & Co., Eugene, Ore.

Gulf States Section

Student Grade

LOUISIANA STATE UNIVERSITY

Ahrens, E. K. — Hurst, C. S.
Deloney, H. W. — Jeansonne, C. J.
Gaskins, P. C. — Rogers, W. H.
Griffin, E. E. — Wale, C. R.
Wallace, H.

Affiliate Grade

Smith, R. J., Forester, USFS, Raleigh, Miss.

Inland Empire Section

Student Grade

UNIVERSITY OF IDAHO

Allen, H. R. — Schmitt, W. E.
Furniss, A. B. — Yingling, G. H.

Junior Grade

Student Eligible for Automatic Advancement

UNIVERSITY OF IDAHO

Brandt, J. C.

Member Grade

Carlson, M. R., 126 N. Garfield, Moscow, Idaho (Junior 1954).

Cowley, A. P., Asst. Dist. Ranger, USFS, Orofino, Idaho (Junior 1954).

Giertsen, O. N., 716 10th St., Lewiston, Idaho (Junior 1954).

Graham, D. A., Asst. Ranger, USFS, Clarkia, Idaho (Junior 1954).

Gregory, C. W., 3427 West Francis, Spokane 15, Wash. (Junior 48R55).

Hanover, J. W., 512 North Grant, Moscow, Idaho (Junior 1954).

Hazelbaker, D. L., Box 21, Bonners Ferry, Idaho (Junior 49R55).

Mathison, R. S., Forest Ranger, USFS, St. Maries, Idaho (Junior 1954).

McArdle, J. P., Forest Ranger, Clark Fork Ranger Sta., Clark Fork, Idaho (Junior 1954).

A PROFITABLE PAIR FOR ALL FORESTERS

Those Bartlett Saws are widely used by Conservation Departments, Municipalities and Public Utilities.

M-414 MEYLAN SAW (right) saves up to 25% in time in pruning of coniferous forests by enabling a man of average height to trim 9½ feet above the ground. 16 or 18-inch curved blade of heavy tool steel has 7 teeth per inch. Specially tapered 36" axe handle speeds work, lessens fatigue.

M-414, 16" Blade $12.00
M-414, 18" Blade $12.50

Fast-cutting NO. 44 POLE SAW (left) for higher limbs. 16" peg tooth blade, 7 teeth per inch. Hook for hanging on limb when not in use. Blade ground for clearance and to prevent binding. Adjustable to operator's position. Sitka spruce poles in 8, 10, 12, 14 and 16' lengths.

one piece poles.
8'—$14.70
10'— 15.40
12'— 16.10
14'— 16.80
16'— 17.50

sections available at extra price

No.-44 M-414

Above Prices Delivered in U.S.A.

Write for catalog showing all Bartlett Tools and Supplies.

BARTLETT MFG. CO.
3015 E. Grand Blvd. Detroit 2, Mich.

McManamon, D. R., Box 611, Kamiah, Idaho (Junior 1954).
Rehfeld, R. O., Box 801, Orofino, Idaho (Junior 1954).

Intermountain Section

Student Grade

UTAH STATE UNIVERSITY

Arbogast, F. T.	Latham, R. P.
Ashton, M. W.	McCarthy, J. C.
Brewster, S. F.	Neville, G. K.
Brooks, W. T.	Pickett, D. C.
Droege, R. E.	Pritchard, J. W.
Ecker, D. R.	Ramey, G. W.
Eddy, H. V.	Robbins, R. L.
Gibbs, V. R.	Tallmadge, J. F.
Hieber, D. E.	Thurgood, C. J.
Hoffmeier, W. J.	Webb, R. W.
Jensen, E. C.	Wert, S. L.
Katwyk, T. M.	Weston, J. A.
Koons, J. F.	Zrelak, T. G.

New England Section

Student Grade

UNIVERSITY OF MAINE

Allen, D. C.	Morrill, G. W.
Dawson, R. J.	Osborne, R. W.

UNIVERSITY OF MASSACHUSETTS

Lee, L. L.

UNIVERSITY OF NEW HAMPSHIRE

Buzzell, G. L.	Ouellette, G. J.

YALE UNIVERSITY

Alcorn, W. W.	Huber, D. G.
Garrepy, R. L.	Lowrie, C. N.
Zasada, J. C.	

Junior Grade

Baskerville, G. L., Graduate Student, Yale School of Forestry, New Haven, Conn. Yale Univ., MF, 1957.
SCHIER, G. A., Student, Yale School of Forestry, New Haven, Conn. Univ. N. H., BSF, 1958.
Zwolinski, M. J., Student, Yale School of Forestry, New Haven, Conn. Univ. N. H., BSF, 1959.

EVERGREEN
SEEDLINGS AND TRANSPLANTS
Growers of Pine, Spruce, Fir, Hemlock, etc.
FREE WHOLESALE PRICE LIST
SUNCREST NURSERIES
BOX 305-G, HOMER CITY, PENNA.

BAKED ENAMEL
METAL FORESTRY SIGNS
for WOODLAND BOUNDARY MARKERS—NO TRESPASSING & FIRE WARNING SIGNS—LOCATION MARKERS—CRUISER TAGS—etc., any size to your specifications. WRITE FOR QUOTATIONS ON ALL YOUR SIGN NEEDS. State size and quantity.
A. L. LIND COMPANY
5036 THOMAS AVENUE SOUTH
MINNEAPOLIS 10, MINNESOTA

CHRISTMAS TREE SEEDLINGS—
of the best quality—grow trees for Profit, Conservation, Beauty and Recreation. Scotch pine from our own blue-green handpicked seed, selected for best Christmas tree qualities. Write for Catalog of wide selection of seedlings, transplants, and ornamental evergreens.
PAINT CREEK NURSERIES
Shippenville, Pa.

Member Grade

Barron, W. D., Forester, Prentiss & Carlisle, Bangor, Maine (Junior 1954).
Furnival, G. M., Prof., Yale Univ., New Haven, Conn. (Junior 49R55).
Merrill, B. D., Asst. Supv., Maine Forest Service, Dover Foxcroft, Maine (Junior 1954).
Natti, T., Forester, N. H. Forestry & Recreation Comm., Concord, N. H. (Junior 50R55).

New York Section

Student Grade

STATE UNIVERSITY OF NEW YORK

Kotyrba, C. H.	Pringle, G. A.
Martin, J. A.	Watson, R. S.
Nagell, R. W.	Xydios, G. K.

Junior Grade

Breslin, T. A., Forester, N. Y. State Cons. Dept., Warsaw, N. Y. (Reinstatement).
Mancini, A. J., Graduate Student, Syracuse Univ., Syracuse, N. Y. Univ. N. H., BSF, 1956.
Weidhaas, J. A., Asst. Prof., Cornell Univ., Ithaca, N. Y. Univ. Mass., BSF, 1949, MS, 1952.

Northern California Section

Student Grade

UNIVERSITY OF CALIFORNIA

Ford, B. K.	Little, G. H.
Kenline, G. A.	Maloney, J. E.
Scroggins, L. R.	

Northern Rocky Mountain Section

Student Grade

MONTANA STATE UNIVERSITY

Broatch, M. G.	Mershon, J. I.
Butts, C. D.	Meyer, N. R.
Cartwright, D. E.	Packee, E. C.
Croft, C. B.	Peterson, C. A.
Dern, G. K.	Poulsen, P. R.
Hornung, K. E.	Stephenson, J.
Inman, J. P.	Worthington, K. T.
Magone, L. M.	Young, R. J.

Affiliate Grade

Howard, C. R., Forester, USFS, Moxon, Mont.

Ozark Section

Junior Grade

Dix, T. Q., Asst. Dist. Ranger, USFS, Ozark, Ark. (Affiliate 1958).
Tennant, K. E., Farm Forester, Mo. Cons. Comm., Poplar Bluff, Mo. (Reinstatement).

Member Grade

Christensen, M. C., Ranger, USFS, Salem, Mo. (Junior 42R55).
Fisher, H. R., Forest Ranger, USFS, Danville, Ark. (Junior 1954).
Gass, R. D., Farm Forester, Mo. Cons. Comm., Ironton, Mo. (Junior 1954).
May, L. C., Head Forester, Olin Mathieson Chemical Corp., Huttig, Ark. (Junior 1954).
Merrill, T. H., Forester, Deltic Farm & Tbr. Co., Inc., Ola, Ark. (Junior 1954).

Affiliate Grade

Owens, M. R., Forester, Ark. Power & Light Co., Pine Bluff, Ark.
Tyree, B. P., Asst. Dist. Ranger, USFS, Tulsa, Okla. (Reinstatement).

Puget Sound Section

Student Grade

UNIVERSITY OF WASHINGTON

Andrews, D. A.	Rollins, G. T.
Brown, J. E.	Theoe, D. R.
Hedin, A. T.	Trowbridge, L. W.
	Weston, D. D.

Junior Grade

Coon, R. K., Dist. Ranger, Packwood Ranger Dist., Packwood, Wash. Univ. Wash., BSF, 1950.

Member Grade

Benson, S. A., Inventory Forester, Weyerhaeuser Co., Chehalis, Wash. Univ. Wash., BSF, 1956 (Junior 1956).

Southeastern Section

Student Grade

AUBURN UNIVERSITY

Brown, J. E.	Shirley, J. D.
Carpenter, R. F.	Shumack, M. R.
Taylor, R. M.	

UNIVERSITY OF GEORGIA

Bailey, J. W.	Harp, S. L.
Bailey, T. L.	Hinson, C. E.
Booth, A. K.	Hitchcock, C. R.
Booth, W. S.	Jager, E. M.
Brooker, B. W.	Kitchens, R. N.
Brooks, J. H.	May, B. L.
Campbell, G. C.	McDonald, A. R.
Copus, E.	Neidlinger, D. M.
Durham, J. V.	Nicholls, S. C.
Eichost, W. T.	Perry, G. L.
Fair, T. J.	Rogers, G. E.
Gowen, J. G.	Sanders, B. A.
Gowen, R. W.	Sesco, J. A.
Gregory, C. G.	Sheffield, J. H.
Hamilton, W. W.	Strickland, H. A.
Veal, B. D.	

Member Grade

Altobellis, A. T., 2688 Stanislaus Circle, Macon, Ga. (Junior 1954).
Chellman, C. W., Farm Forester, Fla. Forest Service, Orlando, Fla. (Junior 1954).
Clark, R. T., Forester, Hudson Pulp & Paper Co., Palatka, Fla. (Junior 1954).
Frevert, R. W., 23 Simpson Dr., Rome, Ga. (Junior 1953).
Gay, J. E., % Ga. Wood Inc., Box 25, Arabi, Ga. (Junior 1951).
Gregory, A. H., 2227 Winston Ct., Augusta, Ga. (Junior 1954).

WANTED
Four Copies of J. Kittredge's
FOREST INFLUENCES
Published by McGraw-Hill (1948)
Send offers to
Michigan State Univ. Library
East Lansing, Mich.

ROOTSPRED
TREE PLANTERS
- Proven non-clogging design in a 3-point hitch scalping planter
- Scarifying point which travels several inches deeper, breaking the soil for better root penetration
- Simple, strong, low-maintenance design
- Professional consulting service on your specific planting problems

Write for additional information to
ROOTSPRED CO.,
ST. PETERSBURG, PA.

Haas, C. W., Forester, International Paper Co., Ponce de Leon, Fla. (Junior 1954).
Haeussler, F. W., P. O. Box 178, Kingsland, Ga. (Junior 1954).
Handy, H., Box 25, Blairsville, Ga. (Junior 1954).
Harling, R. M., Box 529, Madison, Ga. (Junior 1954).
Hill, J. C., 100 Thomas Blvd., Warner Robins, Ga. (Junior 1954).
House, G. O., Farm Forester, Fla. Forest Service, Blountstown, Fla. (Junior 1954).
Jackson, W. A., % Forest Service, Marianna, Ark. (Junior 1951).
James, K. E., Forest Mgr., Union Bag-Camp Paper Co., Pierson, Fla. (Junior 52R54).
Jones, E. P., 714 25th Avenue, E., Cordele, Ga. (Junior 1954).
Jones, L., 2309 Kensington Rd., Macon, Ga. (Junior 1954).
Jones, R. A., Southlands Expt. Forest, Bainbridge, Ga. (Junior 52R54).
Kennedy, I. C., Pooler, Ga. (Junior 47R55).
Kirby, W. C., Brunswick Pulp & Paper Co., Brunswick, Ga. (Junior 47R56).
Knott, O. L., 2471 Treadway Drive, Macon, Ga. (Junior 1954).
Lane, E. B., % Graham's, Washington, Ga. (Junior 1953).
Lee, R. E., Union Bag-Camp Paper Corp., Savannah, Ga. (Junior 1953).
Maxwell, K. F., Southlands Expt. Forest, Bainbridge, Ga. (Junior 1954).
McMichen, R. D., 37 Broadmoor Circle, Savannah, Ga. (Junior 1954).
Meadows, J. C., 1017 Center Drive, Vidali, Ga. (Junior 1954).
Miller, M. L., Rt. 1, Stilson, Ga. (Junior 51R55).
Mudick, N., St. Marys Ga. (Junior 1954).

WIRELESS INTERCOM

Just plug in and talk

The first practical portable intercom, Vocatron requires no special connecting wires—you just plug in and talk. And the price is right.

Only $109 a pair

Forestry Suppliers, Inc.

P. O. Box 8305, Battlefield Station
Jackson 4, Mississippi

Pennington, R. E., Forester, Union-Bag-Camp Paper Co., Umatilla, Fla. (Junior 1954).
Poole, J. W., Box 634, La Grange, Ga. (Junior 50R54).
Postlethwait, S. F., Box 216, Blairsville, Ga. (Junior 1954).
Proctor, J. C., P. O. Box 305, Woodbine, Ga. (Junior 51R55).
Promis, A. E., 1298 Fairburn Rd., S. W., Atlanta, Ga. (Junior 1954).
Pyle, A. W., Head, Koppers Co., Gainesville, Fla. (Junior 1954).
Raper, C. F., 2765 Gwinette Drive, Macon, Ga. (Junior 1954).
Rice, W. D., Instructor of Forestry, Forest Ranger School, Lake City, Fla. (Junior 1954).
Ryder, J. D., Bellville, Ga. (Junior 51R54).
Seymour, Z. L., Rt. 1, Rocky Face, Ga. (Junior 49R55).
Smith, A. E., Forester, St. Regis Paper Co., Macclenny, Fla. (Junior 48R55).
Smith, A. C., Box 157, Hazelhurst, Ga. (Junior 52R59).
Smith, D. J., Wood Procurement Forester, Container Corp., Brewton, Ala. (Junior 1953).
Smith, J. R., Forester, St. Regis Paper Co., Cantonment, Fla. (Junior 1954).
Sosbe, E. H., 104 John Ross Drive, Rome, Ga. (Junior 49R54).
Starling, W. B., Box 44, Cuthbert, Ga. (Junior 1951).
VanDenburg, D. O., 125 Poplar St., Decatur, Ga. (Junior 1954).
Wainwright, R. E., 1206 Morningside Drive, Waycross, Ga. (Junior 1953).
Weiland, G. W., 509 West Columbia Avenue, Lyons, Ga. (Junior 1954).
Wilsky, H. F., Forester, St. Regis Paper Co., Lee, Fla. (Junior 51R55).
Wimpenny, A., P. O. Box 784, Homerville, Ga. (Junior 1953).
Wooten, R. F., 108 Andrews Drive, Camilla, Ga. (Junior 52R55).

Affiliate Grade

Hayes, H. P., Cons. Forester, Tenn. River Pulp & Paper Co., Counce, Tenn.
Stewart, A. M., Forester, Tbr. Suppliers, Inc., Camilla, Ga. (Reinstatement).

Upper Mississippi Valley Section

IOWA STATE UNIVERSITY

Student Grade

Bird, C. C. — Gordon, J. C.
Pierce, R. C.

UNIVERSITY OF MINNESOTA

Andrews, L. E.	High, C. P.
Ankerstjerne, R. J.	Johnson, I. L.
Buttrey, T.	Johnson, P. A.
Dieckhaus, J. W.	Johnson, R. C.
Doucette, R. P.	Madder, R. A.
Engels, J. D.	Pokela, R. W.
Gray, G. E.	Russell, K. W.
Harms, R. D.	Seemel, R. R.
Henson, L. D.	Swanson, W. H.

Junior Grade

Bormanis, A., Forester, Iron Range Res. & Rehab. Comm., Hibbing, Minn. (Affiliate 1958).

Member Grade

Reed, M. O., Asst. Ranger, USFS, Bermidji, Minn. (Junior 1954).

Washington Section

Junior Grade

Doverspike, G. E., Research Forester, Agric. Research Center, Beltsville, Md. (Reinstatement).

Wisconsin-Michigan Section

Student Grade

MICHIGAN COLLEGE OF MINING & TECHNOLOGY

Damson, R. E.	Partyka, E. J.
Johnson, N. L.	Randall, W. K.
Lewis, R. D.	Remington, N. W.
Matero, D. A.	Woodward, R. A.

MICHIGAN STATE UNIVERSITY

Adams, P. W.	Lowery, W. L.
Fenlon, T. M.	Mason, L. D.
Gelock, J. A.	Owen, L. J.
Gerber, J. G.	Schatz, D. A.
Hurja, T. J.	Shaar, C. J.
Johnston, J. M.	Simpson, D. R.
Larson, K. L.	Zdzieblowski, A. D.

Junior Grade

Larson, R. E., Dist. Ranger, USFS, Manistee, Mich. Iowa State, BSF, 1950.
Volavka, W. R., Forester, Wis. Cons. Dept., Washburn, Wis. State Univ. N. Y., BSF, 1958.

Member Grade

Decker, T. P., Forester, Village Fox Point, Fox Point, Wis. (Junior 50R55).

No Section

Corresponding Grade

Buaca, N., Chief, Forestry Designing Bureau, Gospodaza Vucica, Yugoslavia.
Cassagnol, R., Supv., Haitian American Development Organization, Damien, Haiti.
Del Castillo, R. A., Instructor in Forest Mgmt., Univ. of the Philippines, Laguna, Philippines.
Marinkovic, B., Chief, Forestry Enterprise, Sremskr Kamenica, Yugoslavia.
Moriyasu, H., Chief, Forestry Administration, Okayama, Japan.
Nakada, K., Chief, Nagano Prefecture, Nagano City, Japan.

TM MODEL

Lowther Heavy duty tree planters insure deep penetration and straight root systems.

Our Sod Scalpers aid survival and growth.

Six distinctly different models available to cover all soil and terrain conditions.

For details write

HARRY A. LOWTHER COMPANY

1671 DEARBORN STREET
AURORA, ILLINOIS

Forestry News

National Forests Income $148 Million in Fiscal 1960

Land managed by the U. S. Forest Service earned $148,212,471 from the sale and use of resources during fiscal year 1960, an increase of $24,145,680 over 1959, according to the U. S. Department of Agriculture. The 181 million acres of national forest land contributed $146,348,136. The remaining $1,864,336 was collected from 4.6 million acres of marginal and submarginal land puprchased in the 1930's under the Bankhead-Jones Act. Timber sales accounted for more than 94.6 percent of the receipts—$140,125,842, an increase of $23,970,899 over the previous year. The balance of the revenue came from grazing fees, $4,507,956; recreation uses, $1,118,769; power uses, $136,412; mineral leases and permits, $1,919,257; crops, hay and sale of seed, $51,181; and other special land use, $353,051. Twenty-five percent of receipts is paid to counties for roads and schools. The remainder goes into the Federal Treasury.

Canadian Forestry Institute Holds Annual Meeting

A joint meeting of the Canadian Institute of Forestry and La Corporation des Ingénieurs Forestiers de la Province de Quebec was held October 24-28, 1960, in the City of Quebec at the Chateau Frontenac. Total attendance was 700. The theme of the meeting was "Forestry Education in Canada."

Paul E. Lachance, chairman of the convention committee, opened the meeting. Among those giving addresses of welcome were H. J. Hodgins, president of the Canadian Institute of Forestry; Maurice Gerin, president of the Corporation of Forest Engineers; and L. Z. Rousseau, dean of the Faculty of Forest Engineering, Laval University.

I. F. Fogh served as moderator of the several panels on education. Among the speakers were H. W. Blenis of the Maritime Forest Ranger School, Fredericton, N. B.; George S. Allen, dean of the Faculty of Forestry at the University of British Columbia; J. W. B. Sisam, dean of the Faculty of Forestry at the University of Toronto; J. Miles Gibson, dean of the Faculty of Forestry at the University of New Brunswick; and Dr. Rousseau of Laval.

Field trips were made to the Duchesnay Forest Ranger School and to the Experimental Station of Beausejour; to the Forest Research Laboratory of Canada at Ste. Foy; and to the forestry building of Laval University.

Range Conservation Stamp Announced

The Post Office Department will issue the world's first range conservation commemorative postage stamp on February 2 at Salt Lake City, Utah.

This 4-cent stamp, to be printed in three colors, will be released at the annual meeting of the American Society of Range Management under joint sponsorship with USDA's Forest Service and Soil Conservation Service; the Interior Department's Bureau of Land Management and Indian Service, and the Post Office Department.

Designer of the range stamp was Rudolph Wendelin, USDA artist who designed the forest conservation stamp. It is the eighth in a conservation series which has included wildlife, forest, soil, and water conservation subjects.

Fifty Years of Forestry at Laval University, Quebec

The fiftieth anniversary of the faculty of forest engineering at Laval University, Quebec, Canada, was celebrated on October 25-27, 1960. About 500 alumni, wives, and friends attended the ceremonies.

On the afternoon of October 26 visitors were greeted in the forestry building, erected in 1950, by Dr. L. Z. Rousseau, dean of the Faculty of Forestry. A plaque was unveiled in honor of the premier of the Province of Quebec, the rector of the University, and Gustave C. Piché, first doyen of the forestry faculty, who held office when the curriculum was started in 1910.

Participating in the ceremonies were George Allen, dean of the Faculty of Forestry at the University of British

THE FECHHEIMER BROS. CO.
UNIFORMS FOR OVER 80 YEARS
U. S. FOREST SERVICE—STATE AGENCIES
MISC. OUTDOOR EMPLOYEES
Complete Price List on Request
CINCINNATI 2, OHIO

FOR SALE
Slash, Loblolly, Longleaf
and
Shortleaf Pine Seed
In Wholesale Quantities
Treated with Rodent and Bird Repellent For Direct Seeding
For over ten years
a dependable source
for
Southern Pine Seed
SOUTHERN SEED COMPANY, INC.
Baldwin, Georgia

REMOVE LIGHT GLOBES 60 ft.
Wash Windows Three Stories High
PRUNE TREES & PICK FRUIT
60 ft. up

PHONE OR WRITE FOR
Free 24-Page Catalog
MFRS. OF A COMPLETE LINE OF
SWIMMING POOL EQUIPMENT
SOLD DIRECT TO YOU
POOL BRUSHES • RAKES
SKIMMERS • PUMPS
LIFE BUOYS
PLASTIC HOSE
DIVING BOARDS
POOL HEATERS
POOL FILTERS
POOL SLIDES
POOL BOATS
POOL CHEMICALS
POOL COVERS
FILTERS
PUMPS
COVERS
HEATERS
MAdsn 6-9397
J. B. Sebrell
DEPT. 301 S. SAN PEDRO ST.
LOS ANGELES 13, CALIFORNIA

Columbia: J. Miles Gibson, dean of the Faculty of Forestry at the University of New Brunswick; and J. W. B. Sisam, dean of the Faculty of Forestry at the University of Toronto. Henry Clepper represented the Society of American Foresters.

On the evening of October 26 a special convocation was held in the Salle des Promotions of the University. Six honorary degrees were awarded by the University to the following Canadian foresters:

Percy M. Fox, president of the Quebec Forest Industries Association and of the St. Lawrence Corporation, Montreal.

J. Miles Gibson, dean of the Faculty of Forestry at the University of New Brunswick, Fredericton.

J. H. Jenkins, director of the Dominion Forest Products Laboratory, Ottawa.

Felix-Henri Kieffer, director of the Provincial Forest Protection Service, Quebec.

Ernest Menard, consulting forest engineer, a graduate of the first (1912) class, Quebec.

H. Arthur Sewell, vice president of the Industry Advisory Committee on Forestry to the University, Thorold, Ont.

The ceremonies concluded with a memorial mass for Laval University alumni in the new campus church.

Lumber Exports Up; Imports Are Down

Lumber exports from the United States in the first half of 1960 amounted to 452,910,000 board feet, an increase of 26 percent over first half 1959 exports, while imports were down 3.6 percent to 1,941,964,000 board feet, the Forest Products Division, Business and Defense Services Administration, U. S. Department of Commerce, has reported.

The export increase and the import decrease were registered in both hardwood and softwood, the Division said, in a compilation of statistics from the Bureau of the Census.

Softwood lumber exports of 361,544,000 feet were 34 percent greater than for the comparable period of 1959. Douglas-fir showed the largest increase (58 percent), from 131,325,000 feet in 1959 to 207,606,000 feet in 1960. Southern pine increased 38 percent, from 35,081,000 feet to 48,541,000 feet. Other softwoods increased only slightly, from 103,463,000 feet to 105,301,000 feet. However, substantial changes occurred in individual species. Spruce, hemlock, and redwood showed heavy gains, while ponderosa pine dropped more than 50 percent.

Hardwood lumber exports increased 6 percent, from 56,480,000 feet in 1959 to 59,864,000 feet in 1960. Exports of railroad ties increased about 30 percent in the 1960 period, from 14,674,000 feet to 19,033,000 feet. Hardwood flooring declined about 43 percent, from 12,787,000 feet in 1959 to 7,337,000 in 1960.

With the exception of Canada, where there was a 20 percent decline, exports to most of the major markets increased during 1960 compared with 1959. Areawise, the greatest percentage increase occurred in exports to the African countries, which amounted to approximately 156 percent—from 13,787,000 feet in 1959 to 35,273,000 in 1960.

Softwood imports of 1,796,136,000 feet were about 4 percent below the previous year. Imports of Douglas-fir, pine, and hemlock all declined, but there were increases in spruce, and other fir, and other softwoods.

Hardwood lumber imports declined approximately 4 percent, from 147,693,000 to 141,752,000 board feet. Philippine type hardwoods, birch, beech, and maple lumber declined, while mahogany and other hardwoods showed increases.

Forestry Education in Brazil Studied

In the spring of 1960, the Brazilian government as represented by ETA (Escritoria Technico de Agricultura) requested that a forestry consultant be

IT'S A FACT--

SAVANNAH Tree Marking PAINT

is economical and easy to use

- OVER 300,000 GALLONS USED DURING LAST 8 YEARS
- LONG LASTING
- PROMPT SHIPMENT

WRITE for color card, information on price, types of containers, etc.

Savannah Paint Mfg. Co.
SAVANNAH, GEORGIA
P. O. BOX 3162, Dept. A STN. A

GROW Sturdy PINE

Rid pine forests of choking brush. Use R-H Injection Fluid or spray with L. V. Brush Rhap; contains 2,4,5-T formulated for economical pine release. For free information write

Reasor-Hill Corporation, Box 36JF, Jacksonville, Ark.

Binders For Journal of Forestry

Holds 12 issues of Journal

Brown imitation leather—stiff board—square corners lined.

Title *Journal of Forestry* stamped in gold foil on front cover and backbone.

Price $3, postpaid.

Order today

SOCIETY OF AMERICAN FORESTERS
Mills Building, Washington 6, D. C.

sent to that country to assist in the establishment of a forestry school at the Rural University of Minas Gerais. A sum of Cr $30 million had been appropriated by the Brazilian government for such a school. There was no school of forestry in Brazil at that time.

Dr. W. C. Bramble was assigned to this job by Purdue University, which has an ETA project in agriculture in Brazil. Dr. Bramble spent from July 9 to August 22, 1960, in Brazil, first traveling extensively in the central states of São Paulo, Guanabara, and Minas Gerais to get a picture of the forestry situation. At the same time, contacts were made with public and industrial foresters to acquaint them with the proposal and to learn of their interests. Later a brief study was made of the situation at Viçosa, where the school is to be located and recommendations were made to University officials.

A beginning has been made which is most promising but will require some follow-up work and is dependent on the course of national politics. There are 25 students now enrolled in forestry and a basic two years has been agreed upon. A director and forestry staff are being sought and a forestry building is being planned. The state is turning over to the school a virgin forest area of some 70,000 acres in the nearby Rio Doce Region for use as a forestry camp site and research area.

Brazil faces a shortage of one of its principal exports, Paraná pine, in about ten years. Native timber for manufacture and charcoal is rapidly being depleted in central Brazil. Public forestry is almost totally lacking in all states except São Paulo. Industrial forestry is expanding only in a few major areas. The federal forestry service is just coming to life but needs a good transfusion to live. All this is an ideal setting for a forestry school which is undoubtedly one of Brazil's great social and economic needs at this time.

A. Bristow Hood (*left*), newly elected president of the National Lumber Manufacturers Association, is congratulated by Eliot H. Jenkins, who succeeds him as chairman of the National Wood Promotion Committee. Elections were held at the annual meeting of NLMA in Washington, D. C. during November. Hood is vice president and general manager of the Ralph L. Smith Lumber Company, Anderson, California. Jenkins, of Eugene, Oregon, is president of the West Coast Lumbermen's Association.

Wildlife Week

"Multiple Use—Balanced Conservation Planning for the Future" will be the theme of National Wildlife Week, March 19-25, 1961.

Setting the tone of the observance, National Wildlife Federation President Claude D. Kelley of Atmore, Ala., said: "In view of needs to satisfy the many demands of an increasing population, it is particularly important that all public land and water resources be managed for multiple uses."

Private & Industrial

American Pulpwood Association Announces 1961 Annual Meeting

The Open Industry Sessions of the 27th annual meeting of the American Pulpwood Association will be held on February 21 and 22, 1961, at the Hotel Roosevelt, New York, N. Y.

Starting with the annual luncheon on February 21, the Forest Policy Forum session will follow, featuring issues of significance to leaders of the industry. A president's reception will conclude the planned program for this day.

Two Open Industry Sessions on February 22 will include pulpwood topics of national and international interest as covered by outstanding speakers. Wednesday's sessions will close with the annual dinner of the Association.

Important APA committee meetings will be held on Monday afternoon and Tuesday morning, February 20 and 21, prior to the open sessions. The annual business meeting of members and of a newly elected board of directors will be held on February 23.

Foresters Join Weyerhaeuser Research Staff

Two members of the Society of American Foresters have joined the staff of Weyerhaeuser Company's research division.

R. H. Kunesh was assigned as a technologist at a laboratory recently established in Seattle, Wash., by the pioneer timber products concern. R. L. Corbin holds a similar position at Weyerhaeuser's Longview, Wash., laboratory.

Georgia-Pacific Forester Named to Corporation's Board

John S. Brandis, senior vice president, timberlands and production, has been elected to the board of directors of the Georgia-Pacific Corporation.

Brandis has been identified with the

SILVA COMPASS
Easy, Precise, Fast to Use!
Recommended by foresters. Built-in mechanism to adjust for declination; sighting mirror; many other features. *Write for free literature and instructions.*
SILVA, INC. La Porte, Ind.
RANGER MODEL

THE BEST EVERGREENS COME FROM WESTERN MAINE
American Arborvitae, Balsam Fir, Colorado Blue Spruce, Douglas Fir, Scotch Pine, Norway Spruce, White Spruce, etc. Free Folder lists complete selection of guaranteed to live evergreens at reasonable prices. Write today.
WESTERN MAINE FOREST NURSERY CO.
Dept. JF11
Fryeburg, Maine

PLANTING TREES?
Use a "FORESTER" or "CONSERVATOR" Planter
Complete information on request
UT&BCo
BUILDERS OF DEPENDABLE EQUIPMENT SINCE 1928
UTILITY TOOL & BODY CO.
Clintonville, Wis.

PACIFIC WEATHER SERVICE
WEATHER: Forecasts—Warnings—Modification.
Fire Danger Rating—Instruments
J. B. "Ben" Melin, Meteorologist
1222 N.E. 117th Ave., Portland 20, Oregon
AL. 2-5410

FOREST SEEDS of CALIFORNIA
R. S. Adams & A. P. Baal
Professional Foresters
P.O. Box 561 — Davis, California
since 1952

FREE CATALOG of Forestry Supplies
Ask for Catalog No. 6—80 pages illustrating hundreds of items for Forestry . . . Wildlife Management and Soil Conservation. Buy from one source . . . at moneysaving prices. Prompt shipment.
NASCO, Inc.
Fort Atkinson, Wisconsin

Consulting Foresters

Professional Services Offered by
Members of the Society of American Foresters

Stevens Forestry Service, Inc.

Timber Estimates • Timber Marking • Timberland Management

If it's Trees or Timber, it's our Business

P. O. Box 1070 Phone 3-5068

EL DORADO, ARKANSAS

Land Surveyors *Consulting Forest Engineers*

BELANGER and BOURGET

86 MOUNTAIN HILL, QUEBEC,
P.Q., CANADA

Forest Surveys and Inventories. Establishing of boundary lines.

Forest Management and Logging plans. Locations for Wood industries.

FOREST MANAGEMENT

Topographic Mapping
Timber Stand Maps
Land Classification
Forest Development Studies
Forest Inventories
Forest Appraisals

Hammon, Jensen & Wallen

MAPPING AND FORESTRY SERVICES

660 HEGENBERGER ROAD OAKLAND 21, CALIFORNIA

General Photogrammetric and Forestry Consulting Services

DOMESTIC TROPICAL

LICENSED TIMBERLAND BROKERAGE

GREENACRES, INC.

FOREST CONSULTANTS USING ENGINEERS—APPRAISERS
FOREST INVENTORIES—DATA PROCESSING

4501 RAINIER AVE.
SEATTLE 8, WASH.
PArkway 5-7800

M. P. LAZARA
General Manager

PERRY O. DONALDSON
KENNETH E. BEIL
ALAN C. RANDALL
CLINTON W. MORROW

50th YEAR—TIMBERLAND MANAGEMENT,
INVENTORY, APPRAISAL AND
MULTIPLE LAND USE PROGRAMS

James W. Sewall Company Old Town, Maine

Branches— Fredericton, New Brunswick, Canada
Cordova, Alaska

forest products industry throughout his business career, starting in 1938 as a logging engineer. He joined Georgia-Pacific in 1955 after twelve years as vice president of the Willamette Valley Lumber Company. He is a director of the Industrial Forestry Association. He is a graduate of Oregon State College with a degree in forestry.

Simpson Timber Company Announces Reorganization

Consolidation and reorganization of Simpson Timber Company operations throughout Washington, Oregon, and California has been announced by Thos. F. Gleed, president.

Under the new arrangement, operating companies formerly known as Simpson Redwood Company, Simpson Logging Company, and Simpson Engineered Wood Products Company all will be known as Simpson Timber Company.

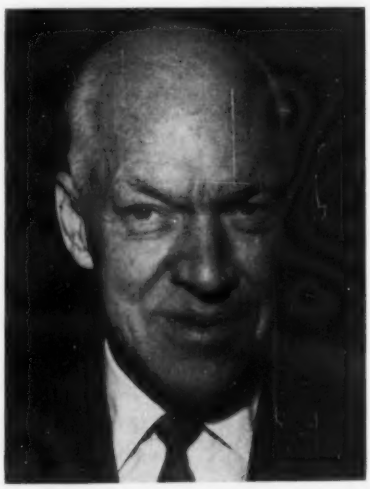
Manufacturing, marketing, and timber management operations will be classified by departments administered in Seattle, Wash., and by product divisions administered in the operating areas.

Schools

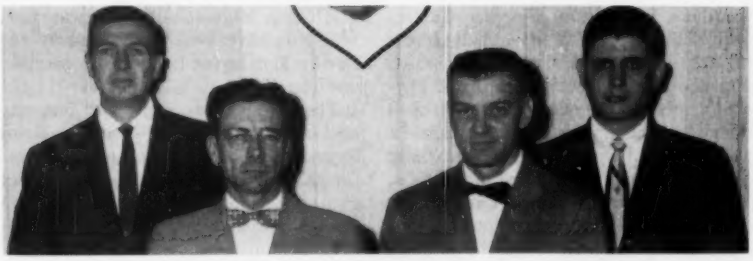
Percy B. Rowe Appointed to University of Arizona Staff

Percy B. Rowe has been appointed associate professor in the Watershed Management Department and watershed management specialist in the Agricultural Experiment Station at the University of Arizona, Tucson. He will teach and do research in forest hydrology and watershed management.

Rowe, a native of Illinois and Idaho, studied geology and forestry at Idaho, receiving his B.S. in forestry in 1928.



PERCY B. ROWE



NEW FACULTY MEMBERS of the University of Georgia School of Forestry are shown with Dean A. M. Herrick. From left: Dr. Claud Brown, Dr. Ernest Provost, Dean Herrick, and William Moss. Dr. Brown is joint staffed with the botany department and will do research in forest tree physiology and genetics. Dr. Provost will teach game management and participate in research at the Savannah River Atomic Energy Commission Project. Mr. Moss will teach mensuration and initiate research on testing and guidance for forestry education.

SHOWN at the meeting of the Florida Forestry Association marking the 25th anniversary of the University of Florida School of Forestry are, left to right: Dr. C. M. Kaufman, director, School of Forestry; Charles A. Connaughton, SAF president; Prof. Harold S. Newins, director emeritus of the School; Dr. J. Wayne Reitz, University president; and Charles Soule, president of the Association.

He received the M.F. (*cum laude*) from Yale in 1930 and has done advanced work at the University of California and the U. S. Department of Agriculture Graduate School.

Since 1943 Rowe has been in charge of various phases of watershed management research at the San Dimas Research Center of the Pacific Southwest Forest and Range Experiment Station, Glendora, Calif., and has served as a consultant to the Forest Service and other agencies and organizations on watershed problems. Between 1931 and 1943 he served as ecologist and forester with the Experiment Station. He developed the North Fork infiltrometer and the infiltration approach to hydrologic analysis, has served as consultant on flood control surveys and supervised the hydrologic analysis phase of a fire damage appraisal study on the national forests of southern California. Prior to 1931, as a junior forester, he was in charge of timber surveys, appraisals and sales on national forests in the Intermountain Region.

Florida Association Marks School Anniversary

The University of Florida School of Forestry celebrated its 25th anniversary on November 2, 1960, in conjunction with annual meetings of the Florida Forestry Association and the Florida Forestry Council.

Albert Ernest, Jacksonville, of St. Regis Paper Co., was elected president of the Association. T. G. Herndon, Extension Service forester, Gainesville, was named chairman of the Council.

Justin R. Weddell, past executive vice president of the Association, presented awards for outstanding contributions to forestry at the luncheon of the Association. Honored were Carl L. Brice, Dr. Wilbur DeLand, Fr. R. Bergquist, and Don Stevenson.

During the anniversary observance, speakers included Dr. J. Waybe Reitz, president of the University, Charles A. Connaughton, SAF president, and Doyle Conner, Florida Commissioner of Agriculture nominee.

JACK E. WINN
Forest Land Evaluation
Tree Farm Management
OLYMPIA, WASHINGTON
3544 SO. QUINCE FLeetwood 2-0465

ALBERT G. HALL
Forestry Relations Counsel
Consulting Forester
Member, Association of Consulting Foresters
810 18th St., N.W., Washington 6, D.C.

THOMAS F. SCHWEIGERT, R.F., R.L.S.
Consulting Forester
Land Surveyor
Penney Building, Petoskey, Michigan

WILLIAM A. EASTMAN, JR.
Consulting Forester
Complete Professional Service
SEATTLE 1, WASHINGTON
410 J. GREEN BUILDING
'Phone MAin 4-2814

FOREST PROPERTY
Estimates—Appraisals—Management
Prentiss & Carlisle Co., Inc.
107 Court Street Bangor, Maine

RESIDENCE MU 8-4353
OFFICE MU 6-4103
DOUGLAS F. HORAN
Consultant Forester
316 WINDSOR LAKELAND, FLA.

WESTERN TIMBER SERVICES
California-Oregon-Washington
Robert E. Kleiner
Arcata, California
Arcata Hotel Bldg. — *VA-2-1333*

POMEROY & McGOWIN
FOREST MANAGERS
Monticello, Arkansas Chapman, Alabama

KEITH CRANSTON, FORESTRY CONSULTANT
LELAND, MISSISSIPPI (HEADQUARTERS)
Professional services and nationwide loans.
Supervision of estates; Management; Marketing; Appraisals; Forestry Personnel Placement with Industry.

Purdue Strengthens Forestry Ph.D. Program

A Ph.D. program in forestry, wood utilization, and wildlife management has been officially approved by the Graduate Council of Purdue University. This approval gives full status to the current Ph.D. program which has been carried out by means of special approval for each student enrolled over the past years. At the present time six Ph.D. candidates are working in forest economics, wood utilization, and wildlife management on a diversity of problems. The program is not expected to expand much beyond its present capacity, and the department will concentrate upon those phases of forestry which it is best fitted to offer. Principal among these are continuous forest inventory in forest management, forest economics in relation to the small woodland problem, wood engineering as related to the uses of wood in light construction, and wildlife management with emphasis on vertebrate ecology and population relationships.

Short Courses

Washington Short Courses Announced

The College of Forestry, University of Washington, will hold an intensive five-day short course in the application and use of aerial photographs in forestry March 13 through 17. The College will also present a Lumber Seasoning Course and Kiln-Drying Demonstration March 20-25 in conjunction with the Institute of Forest Products.

Purdue to Hold Fourth Annual Kiln-Drying Course

The Department of Forestry and Conservation, Purdue University, will be host to the Fourth Annual Cooperative Kiln-Drying Short Course to be held February 27-March 3. Previous courses have been held at Southern Illinois University, Michigan State University, and the University of Illinois, respectively. In addition to these institutions the other cooperating agencies for the course include commercial concerns and the Iowa State University, Southern Illinois University, and the University of Michigan.

Plans for Oregon Logging Safety Institute Listed

Program plans for the first Oregon Logging Safety Institute to be held at Oregon State College February 9-10, 1961, have been announced by the Pacific Northwest Loggers Association and the College.

The two-day management institute has been designed to give the small logger the latest up-to-the-minute information on modern techniques of logging accident prevention. Discussion leaders, representing industrial accident commissions, industrial accident insurance companies, and loggers both large and small, will keep the tempo of the meetings geared to experience and information exchange.

The first day's program will cover the need for accident prevention on logging operations and the causes and cures of logging accidents. The second day will be devoted to the "how" of woods accident prevention. Discussion periods are planned.

Public

Harter Named to Public Relations Post

Leland R. Harter, Salem, Ore., conservation supervisor for the state forestry department, has been appointed public relations director for the department, according to a recent announcement by State Forester Dwight L. Phipps. Harter, who first joined the department in 1943, fills the position made vacant by the retirement of Lynn F. Cronemiller.

Dieterich to Lake States Research Post

John H. Dieterich, forest fire research specialist, has been appointed to the staff of the U. S. Lake States Forest Experiment Station to head up the fire research program of the Station, according to M. B. Dickerman, director.

JOHN H. DIETERICH

WILLIAM H. PRICE
FOREST MANAGEMENT
Specializing in Timber Tax Problems
2626 W. Lynn—Seattle 99, Wash.
AT 3-7482

ADIRONDACK FORESTRY, INC.
David E. Strong Donald E. Peterson
Consultants
Estimates, Appraisals, Marketing
Management Plans, Tree Planting, Preservation
WILMINGTON, NEW YORK

Consulting Forester Forest Surveyor
JOHN STOCK
Specializing in Adirondack Forest and Tax Problems
Box 311 Tupper Lake, N. Y.

GION B. HOOKER
Consulting Forester
1072 ANZIO ST.
CRESCENT CITY, CALIFORNIA

COST ESTIMATES—TAX APPRAISALS—CRUISING SURVEYS AND MANAGEMENT
INTERMOUNTAIN TIMBER SERVICE
4101 STATE ST.
PHONE 2-4300
IDAHO ★BOISE
THOMAS (TOM) C. CLIFTON

MILLIKEN FORESTRY COMPANY
CONSULTANTS—APPRAISERS—MANAGERS
500 BELT LINE BLVD. P.O. BOX 5404
COLUMBIA, S. C.
WILLIAM F. MILLIKEN
K. M. ALLAN
JAMES R. CATHCART, JR.
HUGH M. LUPOLD

SOIL SCIENTISTS **T. S. Coile, Inc.** FORESTERS
Forest Land Consultants
ROUTE 2, BOX 376, DURHAM, N. C. *Phones: 8-9240; 4902*
Land Appraisal Timber Inventories Soil-Site Surveys
Forest Management Planning Growth Prediction Research
"Forest Management Based on Soil Productivity"

A graduate of Colorado State University and the University of Washington, Mr. Dieterich has had 8 years' experience at the Forest Fire Laboratory of the Intermountain Forest and Range Experiment Station in Missoula, Mont. His research there included studies in fire danger rating, lightning fires, fire behavior, and prescribed use of fire in wildland management.

In his new position, Mr. Dieterich will be conducting research in the effects of microclimate, fuel type, and fuel concentration on fire behavior. Prescribed burning for reducing logging-slash hazards and improving wildlife habitat will also be a prime target for research.

National Forest Set Up in Arkansas; Ozark and Nebraska Additions Made

A new national forest has been established by Presidential proclamation—the St. Francis in Arkansas, the U. S. Department of Agriculture announced in Novemeber. Additions were also made to the Ozark National Forest in Arkansas and to the Nebraska National Forest.

The new forest lands do not add to the acreage in federal ownership. They are land utilization projects on once submarginal lands that have been administered by USDA since their purchase by the former Resettlement Administration in the 1930's and rehabilitated under the Bankhead-Jones Farm Tenant Act. The Forest Service has been responsible for their management since 1953.

The new St. Francis National Forest in Arkansas, named for the nearby river, contains 20,600 acres. Forests receiving additional acreage through the transfer of land utilization projects are the Ozark in Arkansas—14,300 acres, and the Nebraska in that State —39,900 acres.

The new forest areas will fall under the jurisdiction of the present national forest supervisors in the states where they are located.

Allied Organizations

Texas Forestry Association Meets

Marvin Angle, area superintendent, International Paper Co., Nacogdoches, Texas, was elected president of the Texas Forestry Association at a special meeting of the board of directors attending the 46th Annual Meeting of the Association.

Other officers elected were Stephen Chase Jr., The Champion Paper and Fibre Co., Pasadena, first vice president, and Steve C. Kardell, San Augustine, second vice president. E. R. Wagoner, Lufkin, was reappointed executive secretary. E. O. Siecke, College Station, is president emeritus.

The banquet address, "Free Enterprise vs the Welfare State" was delivered by Thurman Sensing, executive vice president, Southern States Industrial Council, Nashville, Tenn. Governor Daniel officially launched the "Busy Acres" program in Texas, a program sponsored by the American Forest Products Industries. Other talks were made by R. Vance Miles Jr., vice president, Gulf States Paper Corp., Tuscaloosa, Ala.; Ion S. Walker, director, Public Relations, Southern Kraft Division, International Paper Co., Mobile, Ala.; and Philip A. Briegleb, director, Southern Forest Experiment Station, New Orleans, La.

Mississippi Forestry Association Meets

The Mississippi Forestry Association held its 22nd annual meeting at Jackson on November 18, 1960. Over 400 members were in attendance. U. S. Senator Herman E. Talmadge of Georgia, featured luncheon speaker, stressed the importance of forest products to the economy of the South.

Officers and members of the board of directors were elected at a business session. New MFA president is D. V. Logan, manager of the Delta Region of International Paper Co. J. E. Bryan, chief forester, L. N. Dantsler Lumber Co., was elected vice president.

Fredine New Wildlife Society Executive Secretary

Gordon C. Fredine, park planner with the Mission 66 staff of the National Park Service, is the new executive secretary of The Wildlife Society. Fredine was appointed to succeed Dr.

FRANK J. LEMIEUX
Forester
1015 WHITNEY BUILDING
NEW ORLEANS, LA.

PAUL T. WINSLOW
Consulting Forest Engineer
ESTIMATES—APPRAISALS—MANAGEMENT
STAATSBURGH-ON-HUDSON, N. Y.

EDWARD F. STEIGERWALDT
Consulting Forester
Tomahawk Wisconsin

Ed Knapp Company
G. E. Knapp • D. L. Martindale
Consulting Foresters
4435 Pio Nono Ave. Macon, Georgia

JACK M. HALL
Consulting Forester
Appraisals - Selective Marking
Machine Tree Planting Service
MOULTRIE, GEORGIA

TREE FARM MANAGEMENT SERVICE
1166-7th Avenue, West, Eugene, Oregon
Protection—Reforestation—Inventory
Utilization—Research
Verne D. Bronson, Chief forester, Phone 5-5371

JOHN G. GUTHRIE
Consulting Forester
BOX 517 WIGGINS, MISS.
PHONE WALNUT 8-4958

R. B. SHANNON & ASSOCIATES
— Consulting Professional —
Engineers Foresters
Surveyors Landscape Architects
KITTANNING and INDIANA, PENNA.

GEORGE BANZHAF & COMPANY
622 North Water Street MILWAUKEE 2 BRoadway 6-2062
Consultants to the Wood Using Industries

Index to Advertisers

	Page
Adirondack Forestry Company	66
Banzhaf, George & Company	67
Bartlett Mfg. Company	58
Belanger & Bourget	64
Coile, T. S., Inc.	66
Cranston, Keith	65
Eastman, Wm. A. Jr.	65
Fechheimer Bros. Co.	61
Forest Seeds of California	63
Forestry Suppliers, Inc.	60
Greenacres, Inc.	64
Guthrie, John G.	67
Hall, Al	65
Hall, Jack M.	67
Hammon, Jensen & Wallen	64
Haynes Manufacturing Co.	57
Homelite Corporation	4th Cover
Hooker, Gion B.	66
Horan, Douglas F.	65
Intermountain Timber Service	66
International Harvester Co.	40, 41
Johns Hopkins Press	2
Knapp, Ed Company	67
Lemieux, Frank J.	67
Lind, A. L. Company	59
Lowther Co., Harry A.	60
Meadows, Ben Company	55
Michigan State University	59
Milliken Forestry Company	66
Mora Chemical Corp.	54
Musser Forests, Inc.	56
National Agricultural Supply Co.	63
Nelson Company	57
Omark Industries	3rd Cover
Pacific Weather Service	63
Paint Creek Nurseries	59
Panama Pump	52
Pomeroy & McGowin	65
Prentiss & Carlisle	65
Price, William H.	66
Reasor-Hill Corporation	62
Rootspred Tree Planters	59
Savannah Paint Co.	62
Schweigert, Thomas F.	65
Sebrell, J. B. Co.	61
Sewall, James W. Co.	64
Shannon, R. B. & Assoc.	67
Silva, Inc.	63
Smith, D. B. & Company	2nd Cover
Southern Seed Co.	61
Steigerwaldt, Edward F.	67
Stevens Forestry Service	64
Stock, John W.	66
Suncrest Evergreen Nurseries	59
Tree Farm Management Service	67
Utility Tool & Body Co.	63
Western Fire Equipment Co.	53
Western Maine Forest Nursery Co.	63
Western Timber Services	65
Winn, Jack E.	65
Winslow, Paul T.	67

Joseph P. Linduska, who was voted a life membership in the Society in partial recognition of his service.

Fredine was the principal biologist of the National Park Service prior to his designation as park planner. Before that he was on the staff of the Office of River Basins Studies of the U. S. Fish and Wildlife Service. His mailing address for Wildlife Society matters is 5921 Anniston Road, Bethesda 14, Md.

Ernest Elected President Florida Association

Albert Ernest, vice president in charge of Southern Woodlands for St. Regis Paper Company, was recently elected president of the Florida Forestry Association.

He was elected a vice president of St. Regis in March 1951 and has his headquarters at Jacksonville, Fla.

The Florida Forestry Association, formed in 1923, is a nonprofit organization of citizens "to promote the continuous and highest yields from Florida's 22 million acres of forest land," through cooperation with all other organizations and groups in the state which are concerned with forestry.

Mr. Ernest is a director and member of the Forestry Committee of the Florida State Chamber of Commerce, a member of the SAF, a director of The American Forestry Association, and a director of the Forest Farmers Association.

Forestry Employment

S.A.F. members are privileged to insert one 60-word advertisement in this column without charge. Forest industries desiring to employ foresters may insert advertisements at the rate of $4 per column inch. Copy must be received by the end of this month for an advertisement to appear in the issue after next.

Obviously the Society cannot assume responsibility beyond making it possible for prospective employee and employer to enter into negotiations.

Position Available

District forester. Will work in the fields of forest management, planting, and public relations. Excellent opportunity for advancement in young organization. Qualifications required: graduate forester with an interest in utilization and marketing and the ability to understand and work with people.
C. N. Nelson, State Forester, North Dakota Forest Service, Bottineau, North Dakota.

Positions Wanted

Forester, A.A.S., 1957, Paul Smith's College, to receive B.S.F., Feb. 1961, University of New Hampshire. Age 22, married. Experience; one summer establishing permanent sample plots for the Harvard Graduate School of Forestry. Desire position in consulting forestry or forest management. Peferably in Northeast.
Box E, Society of American Foresters, Mills Building, Washington 6, D. C.

Forestry graduate, B.S. 1959, wants position in either management or wood products field. Am 24, married. Have some experience and good college record. Will accept any location (including foreign).
Box F, Society of American Foresters, Mills Building, Washington 6, D. C.

Forester BSF, Oklahoma State, 1957. Married, veteran. Experience: In South with private industry, in timber management, timber marking, cruising, classification and mapping, hardwood control; also Southwest with Forest Service. Familiar with all phases of district administration.
Box G, Society of American Foresters, Mills Building, Washington 6, D. C.

B.S.F. University of Georgia 1959. Age 31, single. 4 years U.S. Navy. 1 year yard supervisor for 2 stave mills, nationally known Cooperage Company. Interested all phases forestry work. Prefer south or southeastern states.
Box H, Society of American Foresters, 425 Mills Building, Washington 6, D. C.

Forester BSF, University of Washington 1953. Age 32, married, four children, veteran. Experience: Federal and state forestry, complete operation of timber sales, inventory, annual cut determination, sales lay-out, road location, cruising, scaling water and trucks, determination of logging costs, sales supervision, property survey transit, all phases of fire control. Desire position with private industry, preferably in the northwest, Canada, or Alaska.
Box I, Society of American Foresters, Mills Building, Washington 6, D. C.

B.S., Edinburgh University, Scotland, 1955; M.F., University of Michigan, 1959; Ph.D. residence, language requirements fulfilled at Michigan. Age 29, married. One year forest management, tree improvement Scotland and Scandinavia; 17 months B.C. Forest Surveys, field supervisor; 18 months hardwood management and silviculture research with southeastern paper company. Research or teaching position in north or west.
Box J, Society of American Foresters, Mills Building, Washington 6, D. C.

Forester, B.S.F. Purdue University, 1957. Age 25, married, no children. Experience: One year general forestry U. S. Forest Service West Coast. Presently 1/Lt. U.S.A.F. Release March 1961. Interested in public or private forestry. Prefer Lake states, East or mid-west.
Box K, Society of American Foresters, Mills Building, Washington 6, D. C.

Forester, B.S.F., Pa. State Univ., 1955. Age 27, married, two children. Experience: One summer, private industry in Washington (rigger on logging operation); one summer, U.S.F.S. in Minnesota (WPBR Control survey and cruising). Presently serving U.S. Army Corps of Engineers; separation, May 1961. Desire position in private industry located in the Northwest.
Box L, Society of American Foresters, Mills Building, Washington 6, D. C.

"Wood Utilization, B. S., 1958, North Carolina State, veteran, married. Experience: cruising, surveying, and retail lumber business, and general aspects of forest management in South. Would consider permanent position, preferably in South, offering challenge and opportunity for advancement. Prefer private industry or consultant.
Box M Society of American Foresters, 425 Mills Building, Washington 6, D. C.

Forester: B.S. Univ. of Minn., 1960. Age 22, married. Experience: 1 summer with Univ. of Minn. on an ecological research project. Desire position in forestry or related field; any location.
Box N, Society of American Foresters, 425 Mills Building, Washington 6, D. C.

Consulting Foresters

Approved for Listing on January 1, 1961, by the
SOCIETY OF AMERICAN FORESTERS

The following list of Consulting Foresters is published by the Society of American Foresters for the information of prospective clients.

Individuals listed are members of the Society of American Foresters and as such are believed qualified and competent to perform the technical services specified. However, the Society cannot assume responsibility for the actions of individuals or firms listed.

Permission to publish or reproduce this list in whole or in part, but without unauthorized additions, is hereby granted. Revised lists will be issued annually.

*Member, Association of Consulting Foresters.

Code of Fields of Specialization

1. Arboriculture and tree preservation.
2. Cost and economic studies of forest operations.
3. Forest and wood utilization.
4. Forest management and silvicultural practice.
5. Forest protection from disease.
6. Forest protection from fire.
7. Forest protection from insects.
8. Forest taxation.
9. Game and wildlife management.
10. Logging engineering.
11. Market studies and trade promotion (forest products).
12. Naval stores operations.
13. Pulpwood operations.
14. Range management.
15. Surveying and mapping.
16. Timber valuation and appraisal.
17. Timber volume and quality estimates.
18. Tree planting and reforestation; reproduction studies.
19. Wood preservation.
20. Wood seasoning.
21. Wood technology.

Adirondack Forestry, Inc., Wilmington, New York.
Forest Consultants: Donald E. Peterson, David E. Strong.
Territory: Northeastern U. S., esp. Adirondack Mountains.
Specialization: 3, 4, 5, 6. 7, 9, 16, 17, 18. Also aerial photo interpretation, timberland brokerage service, and forest plantation management.

Ernest E. Ahler, Forest Consultant, Route 2, Bishop Road, Knoxville 18, Tennessee.
Territory: Southeast.
Specialization: 2, 3, 4, 6, 13, 16, 17, 18. Also preparation, negotiation or advertisement, and administration of timber sales for large and small timber landowners, boundary line establishment, contract sawmilling, and reforestation.

Airview Specialists Corp., 48 Thomas Lane, Pleasant Hill, California. Aerial surveys — mapping — forestry services.
Territory: United States including Alaska; Canada, Mexico.
Specialization: 4, 5, 7, 15, 16, 17, 18. Also complete aerial photography and mapping services. Color aerial photography for forest photo interpretation.

Thos. W. Alexander, Consulting Forester, Waynesville, North Carolina.
Territory: South, Central States, and Appalachians.
Specialization: 2, 4, 11, 16, 17.

I. V. Anderson, E. 13008 Maxwell, Spokane 67, Washington.
Territory: Eastern Washington and Oregon, Idaho, Montana, and other Rocky Mountain states to Mexico.
Specialization. 3, 4, 11, 16, 17, 18. Including special work on evaluation of ponderosa pine quality and procurement of specialty woods.

John R. T. Andrews, 1450 O'Connor Drive, Toronto 16, Canada. Hunting Survey Corporation, Ltd.
Territory: World wide including tropical forestry.
Specialization: 2, 4, 8, 10, 11, 15, 16, 17, and 18. Also integrated resource surveys and mapping, using photogrammetric techniques.

Glenn O. Antonie, Consulting Forester, 411 South Walnut, Demopolis, Alabama.
Territory: Alabama, Mississippi.
Specialization: 2, 3, 4, 5, 6, 7, 8, 12, 13, 15, 16, 17, 18. Also agent for absentee timber owners; timber sales and cutting supervision; forest litigation.

Ark-La-Tex., Forestry Consultants, Inc., 716 E. Oak, Eldorado, Arkansas and P.O. Box 518, Homer, Louisiana.
Consultant: Jim W. Bottoms.
Specialization: 1, 2, 5, 6.

***James E. Asher**, Consulting Forester, P. O. Box 723, Lake Arrowhead, California.
Consultant: James E. Asher.
Territory: Southern California (not restricted).
Specialization: 1, 3, 4, 5, 6, 7, 10, 15, 16, 17, 18.
Specialized in southern California mountains unique and intense timber management, reforestation problems. Also forest damage and trespass investigation, appraisal, litigation; timber sales, preparation through supervision; native landscaping; advisories, individual tree problems through large management planning; right-of-way inventory-appraisal.

S. Gayley Atkinson, Consulting Forester, 1955 Huntingdon Road, Huntingdon Valley, Pennsylvania.
Territory: Pennsylvania.
Specialization: 1, 18.

Atlantic States Forestry Company, Carthage, North Carolina.
Territory: Unrestricted.
Specialization: 2, 3, 4, 8, 9, 15, 16, 17, 18. Also forest damage appraisals, litigation, timberland sales and purchases, aerial photo-controlled cruises. and reconnaissance from aircraft.

***Henry L. Bango**, Consulting Forester, P.O. Box 5041, Shreveport, Louisiana.
Consultant: Frank Gaensehals.
Territory: Northern Louisiana, south Arkansas, east Texas.
Specialization: 3, 4, 5, 16, 17, 18. Also purchase and sale of timbered properties.

George Banzhaf & Company, 662 North Water St., Milwaukee 2, Wisconsin.
Territory: Not limited.
Specialization: 2, 3, 4, 11, 13, 15, 16. 17.

***W. R. Barnhill**, 1113 Gillespie Ave., Albany, Georgia.
Specialization: 4, 11, 12, 15, 17, 18. Also forest damage investigations, tree planting (contract).

Curtis H. Bauer, Consulting Forester, 54 Dearborn Street, Jamestown, New York.
Territory: Western New York and Pennsylvania.
Specialization: 2, 3, 4, 13, 16, 17, 18. Also timber sales neogotiations, timber trepass and damage appraisals, and Christmas tree management services.

Russell W. Beeson, Wildland Management Consultant, 17 Highland Boulevard, Berkeley 7, California. Telephone: Landscape 5-6906.
Territory: California and Arizona.
Specialization: 4, 6, 9, 14, 16, 17, 18. Also range, watershed and flood control surveys. Land exchanges involving Bureau of Land Management or Forest Service lands.

Belanger and Bourget, Land Surveyors and Forest Engineers, 86 Cote de la Montagne, Quebec, Canada.
Consultant: M. Albert Bourget.
Territory: Canada, especially Quebec.

Specialization: 2, 3, 4, 10, 11, 13, 15, 16, 17, 19, 20, 21. Also boundary lines.

***Frank W. Bennett & Associates**, Consulting Foresters, 4767 Convention Street, Baton Rouge, Louisiana. (Field Headquarters at Norwood, La., Alexandria, La., and Hammond, La.)
Consultants: Frank W. Bennett, and Lionel J. Melanson, Jr., Baton Rouge, Louisiana; Lewis C. Peters, 211 West Thomas Street, Hammond, Louisiana; and James E. Moore, 5106 Leonard Boulevard, Alexandria, Louisiana.
Territory: Southern United States.
Specialization: 3, 4, 6, 10, 11, 16, 17, 18. Retained as consultants by medium-size landowners (500 to 50,000 acres). Manage all forest land resources, including timber, grazing, wildlife, minerals, etc. Make plant location surveys for large wood using plants (pulp mills).

Bigley and Feiss, Foresters, Inc., 767 Blair Boulevard, Eugene, Oregon.
Consultants: *Sherman Feiss, *John Venator, Kent Adair.
Territory: The western states.

John C. Billingsley, Forest Consultant, 924 Fair Street, Newberry, South Carolina.
Consultant: C. Ashley Abel.
Territory: South Carolina, North Carolina, and Georgia.
Specialization: 3, 4, 6, 9, 10, 15, 16, 17, 18.

Bishop Brothers, Consulting Foresters, Marion, South Carolina.
Consultants: H. F. Bishop, Marion, S. C.; R. Q. Bishop, Florence, S. C. Paul D. Wilder, Marion South Carolina.
Territory: South Carolina and southeastern United States.
Specialization: 3, 4, 6, 8, 10, 13, 15, 16, 17, 18.

L. L. Bishop, Forest Consultant, 7034 Airline, Houston 9, Texas.
Territory: East Texas.
Specialization: 4, 6, 16, 18.

Lewis M. Boice, Consulting Forester, Orangeburg, South Carolina.
Territory: Within 100 miles of Orangeburg.
Specialization: 4, 5, 6, 7, 13, 16, 17, 18.

***William J. Bozett**, Consulting Forester, Logan, Ohio.
Territory: Unlimited.
Specialization: 2, 3, 4, 5, 6, 7, 10, 11, 13, 15, 16, 17, 18, 20. Forest management and marketing, land acquisition for investors, damage appraisals, Christmas tree management and tree planting, serving industry.

Allen W. Bratton, Consulting Forester, Shelterwood, Cooperstown, New York.
Territory: Northeast.
Specialization: 4, 5, 6, 7, 8, 11, 15, 16, 17, 18.

Ira L. Bray, Consulting Forester, 420 Pine Street Camilla, Georgia.
Specialization: 3, 4, 5, 6, 7, 8, 9, 12, 13, 15, 16, 17, 18. Site preparation.

C. A. Broadway, Consulting Forester, 113 First Avenue Spartanburg, South Carolina.
Specialization: 3, 4, 16, 17, and 18.

Brown and Brown, Forest Engineers, 612 U. S. National Bank Bldg., Portland 4, Oregon.
Consultants: Eugene R. Walsh (S.A.F. Associate Member), Samuel Rotschy.
Territory: Pacific coast.
Specialization: 2, 3, 4, 6, 8, 10, 11, 12, 15, 16, 17, 18.

Nelson C. Brown, Consulting Forester, 122 Dorset Road, Syracuse 10, New York. During summers, Milford, Pa.
Territory: Northeast.
Specialization: 2, 3, 8, 10, 11, 13, 16, 17.

Harold R. Bruning, Consulting Forester, Route 1, Beulah, Michigan.
Territory: Michigan.
Specialization: 4, 13, 15, 16, 17. Also Christmas tree management, registered forester and registered land surveyor.

Paul E. Bruns, Box 44 Durham, New Hampshire.
Territory: Specialist in Northern Rocky Mountain area.
Specialization: Limited to fair market valuation of timber stands, and management problems.

Charles H. Bunting, Consulting Forester, 1217 Placer St., Redding, California.
Territory: Pacific Coast.
Specialization: 2, 4, 8, 10, 15, 16, 17. Also certified log scaling service; punched card data processing service.

Cal-Pacific Forest Consultants, 3101 Fulton Avenue, Sacramento 21, California; also P.O. Box 733, Soquel, California.
Consultants: James E. Greig, Harvey A. Striplin, Jr., Joseph Griggs, Edward A. Tunheim.
Specialization: Timber and range management, stand improvement, planting, cruising, sales.

***N. D. Canterbury**, Consulting Forester, Parklane Apts. 310, 5701 Jackson St., Houston 4, Texas.
Territory: Texas and southeastern U. S.

Capital Forestry Co., Inc., 2967 Troy Road, Schenectady 9, New York.
Consultant: Ernest L. Handy, Forester and Landscape Architect.
Territory: New York, New England States, Pennsylvania, and New Jersey.
Specialization: Arboriculture, landscape designing and planting, tax and insurance appraisals. Experienced in court testimony as qualified expert.

Dudley C. Carey, 3504 Hillsboro Ct., Louisville 7, Kentucky.
Territory: Not limited.
Specialization: Forest and wood utilization, wood preservation, wood seasoning, wood technology.

Carl M. Carpenter, Consulting Forester, Nashville, Indiana.
Territory: Indiana.
Specialization: 2, 4, 5, 6, 15, 16, 17, 18.

***Clifford B. Carts**, Consulting Forester Box 267, Coudersport, Pennsylvania.
Territory: Pennsylvania, New York, Ohio.
Specialization: 3, 4, 8, 10, 11, 15, 16, 17, 18. Also timber trespass and timber damage appraisal; management agent for timberland owners.

Ralph E. Chamberlin, Consulting Forester, River House 810, 2311 N. Front Street, Harrisburg, Pennsylvania.
Territory: Eastern United States.
Specialization: 2, 4, 15, 16, 17, 18. Also timber investment, farm and forest real estate, forest tree nurseries, Christmas tree management, and Harrisburg representative.

Edward J. Clancy, 1916 Sylvan Road, S. W., Atlanta, Georgia.
Territory: Northern Georgia and adjoining states.
Specialization: 4, 15, 16, 17.

***John T. Clark**, Consulting Forester, Box 923, Quincy, Florida. Registered forester in Georgia.
Territory: Southwest Georgia and northwest Florida.
Specialization: 3, 4, 13, 16, 17, 18. Also management of farm woodlots, hand planting, and control of undesirable hardwoods by hand.

Stuart F. Clark, Consulting Forester, Box 3222, Bellaire, Texas.
Territory: Southern United States.
Specialization: Forest management, appraisals, investments.

Francis H. Clifton, Private Forester, P. O. Box 899; Office, 320 N. Boulevard, Deland, Florida.
Territory: Southeast U. S. A.
Specialization: General forestry, realtor, real estate sales and appraisals, forestry exhibits sales.

***T. S. Coile, Inc.**, Forest Lands Consultant, Rt. 2, Box 376, Durham, North Carolina.
Specialization: Purchase and sale of timberland and management of timberland. Soil productivity surveys. Forest inventories, and growth predictions based on modern methods. Financial forecasts for timber management alternatives. Appraisals. Forestry research for industrial holdings.

Commercial Foresters, Inc., P. O. Box 1274, Asheville, North Carolina.
Foresters: Richard A. Wood and Thomas A. Hudgens.
Territory: Appalachian and Southeastern.
Specialization: 2, 3, 4, 10, 11, 13, 16, 17, 18. Also complete timber marking and sale service and watershed management.

Connwood, Inc., P. O. Box 111, Rockfall, Connecticut.
Consultants: Ralph C. Hawley, Michael M. Pochan, Jr., Sherman H. Perkins, John C. Hobson.
Territory: Connecticut, Rhode Island, and adjacent areas.
Specialization: 3, 4, 10, 11, 13, 15, 17, 18, 19, 21.

David B. Cook, Consulting Forester, 12 McPherson Terrace, Albany 6, New York.
Territory: Eastern New York.
Specialization: Planted larch, chemi-peeling, and basal spray.

***Philip T. Coolidge**, Consulting Forester, retired. Box 102, Bangor, Maine.
General forestry.

Porcius F. Crank, Jr., Consulting Forester, Point Harbor, Currituck County, North Carolina.
Territory: North Carolina and Virginia.
Specialization: 4, 5, 6, 7, 13, 15, 16, 17, 18. Also registered surveyor.

***Keith Cranston,** Forestry Consultant, Leland, Mississippi.
Territory: Mississippi River Delta, entire Gulf Coast and Southeast hardwood bottomlands and pine types.
Specialization: Pine and bottomland hardwood management, and supplemental commercial cruising. Retained in consultant capacity by firms operating in the South, and as consultant-manager for private landowners of bottomland hardwood and pine tracts. Appraisal of estates and division of lands. Loan appraisals.

Keith Cranston Employment Aides, Forestry Consultant, Leland, Mississippi.
Consultant: *Keith Cranston, Personnel director.
Specialization: Personnel placement service provided professional foresters and timbermen. Service to industry.

Lynn F. Cronemiller, Consulting Forester, 1760 Winter Street SE, Salem, Oregon.
Specialization: 2, 3, 10, 14, 16, 17, and 18.

John M. Crowl, Forest Lane Drive, Madisonville, Kentucky.
Territory: Western Kentucky.
Specialization: 4, 5, 6, 13, 14, 16, 17, 18.

John R. Curry, Consulting Forester, Saranac Lake, New York.
Territory: Northeastern States.
Specialization: 3, 4, 8, 10, 13, 16, 17, 18.

Lucas M. Dargan, Consulting Forester, Route #3, Darlington, South Carolina.
Territory: Coastal Carolinas.
Specialization: 4, 6, 9, 16, 17, 18.

***John F. Davis,** Ironshire and Mumford, Snow Hill, Maryland.
Territory: Eastern and Southeastern states.
Specialization: 2, 3, 4, 11, 13, 16, 17, 18.

Paul B. Davis, Consulting Forester, 118 E. Malta Road, Oak Ridge, Tennessee.
Territory: Tennessee, Kentucky.
Specialization: 1, 2, 3, 4, 13, 16, 17, 18.

Ralph A. Davis, Jr., Consulting forester and wood dealer, 2026 Avenue Q, Huntsville, Texas.
Territory: East Texas, Louisiana.
Specialization: 2, 3, 4, 10, 11, 13, 16, 17, 18. Also forest damage appraisal, land acquisition. Agent for absentee landowners, timber sales and cutting, supervision loan appraisals, and land appraisal.

Davison Timber Management Services, Inc., Consulting Foresters, Box 674, Hillsboro, North Carolina.
Consultant: *Alexander T. Davison.
Territory: Eastern and southern states.
Specialization: 2, 4, 5, 7, 8, 13, 15, 16, 17, 18. Also Christmas tree plantation management, forest photogrammetry, and all phases of forest management land resources.

Randle J. Dedeaux, Consulting Forester P. O. Box 57, Perkinson, Mississippi.
Consultant: Randle J. Dedeaux.
Territory: Southern Mississippi; longleaf and slash pine types.
Specialization: 4, 13, 15, 17. Also growth studies, timber marking and marketing, and agent for absentee timberland owners.

Elwood L. Demmon, 241 Old Toll Road, Asheville, North Carolina.
Territory: Unlimited.
Specialization: Consultant on forest management policy for large forest properties; review and criticism of forestry research programs.

H. C. Dickerson, Consulting Forester, P.O. Box 44, Jasper, Texas.
Territory: Texas and Louisiana.
Specialization: 19.

George L. Drake, Forest Consultant, 902 Puget Sound Bank Building, Tacoma 2, Washington.
Territory: Western United States, Canada, and Alaska.
Specialization: 2, 4, 6, 7, 8, 10, 15, 16, 17.

Henry E. Duckett, Jr., Consulting Forester, Worcester, Vermont.
Territory: Northeastern U. S.; Esp. Green Mountains.
Specialization: 3, 4, 5, 6, 7, 8, 9, 15, 16, 17, 18. Also trained crew for timber stand improvement work.

Eastern Forestry, Inc., Box 6, Wake, Virginia.
Consulting Forester: *Edward Stuart, Jr.
Territory: Eastern U. S.
Specialization: 2, 3, 4, 10, 11, 13, 14, 15, 16, 17, 18. Also timberland investment counsel.

William A. Eastman, Jr., Consulting Forester, William A. Eastman & Co., Inc., 410 Green Building, Seattle 1, Washington.
Territory: Pacific Northwest.
Specialization: 10, 16, 17. Also preparation and administration of timber sales, land appraisal, timberland brokerage, and timberland management.

James E. Ebert, Consulting Forester, Pembroke, North Carolina.
Territory: Eastern North Carolina.
Specialization: 4, 6, 13, 16, 17.

W. G. Edwards, 503 West Fairmount Ave., State College, Pennsylvania.
Specialization: 3, 10, 13, 15, 16, 18. Also small sawmill problems, both logging and milling phases.

Ivan M. Elchibegoff, Consulting International Forest Economist, 4206 Kaywood Drive, Mt. Rainier, Maryland. (Associate Member, SAF.)
Territory: Worldwide.
Specialization: 2, 3, 8, 11. Also resource surveys, land utilization, developmental economics, and international trade.

Farmcraft Associates, Inc., Forest Managers, 204 Jackson Street, (Box 322), Oakdale, Louisiana.
Consultants: Printis E. Murphy, Ronnie L. Chenevert, Kelly M. Koonce.
Territory: Southern U. S.
Specialization: Forest investments and technical forest management for private and industrial holdings. Also litigation and damage appraisals and gum naval stores.

Fesla Company, Robert L. Curtis, Consulting Forester and Licensed Surveyor, 536 Beverly Drive, Magnolia, New Jersey.
Territory, U. S. and Foreign.
Specialization: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 15, 16, 17 18.

***David S. Findlay,** Consulting Forester, 20 East 5th Street, Jamestown, New York.
Territory: Western New York and Pennsylvania.
Specialization: 4, 15, 16, 17.

Henry B. Fishburne Consulting Forester. The Crescent, Charleston 44, South Carolina.
Territory: Southeast.
Specialization: 3, 4, 6, 10, 13, 15, 16, 17, 18. Timberland loans.

George M. Fisher, Consulting Forester, 3892 Tulare Avenue, S., Salem, Oregon.
Territory: Western Oregon.
Specialization: 1, 4, 9, 15, 16, 17, 18. Also forest property management and agent for absentee forest owners. Volume estimates and damage appraisals of fire, insect, and disease-killed timber; and trespass investigations. City and town forestry and street tree regulations. Landscape design and planting; forest recreation and beautification.

Reginald D. Forbes, Consulting Forester, R.F.D. 1, Ambler, Pennsylvania.
Territory: Eastern U. S.
Specialization: 4, 6, 17, 18. Also forest resource surveys of timber available to manufacturing plants in specified territories.

Forest Land Management Co., P. O. Box 1046, Morgantown, West Virginia.
Consultant: *Thomas G. Clark.
Territory: West Virginia, western Pennsylvania, western Maryland.
Specialization: Forest land appraisal, forest real estate, timber sales, and markets.

Forest Products Management Company, 1504 Broad Street, Camden, South Carolina.
Consultant: *H. R. Oliver.
Territory: Southern states.
Specialization: 2, 3, 4, 6, 7, 11, 15, 16, 17, 18. Also land appraisals, timber and land sales and bottomland hardwood management.

Forest Services, Inc., 4600 Pio Nono Ave., P. O. Box 1112, Macon, Georgia.
Consultant: *Reuben W. Martin, Jr.
Territory. Southern states.
Specialization: 4, 7, 8, 13, 15, 16, 17, 18. Also equipment, aerial application of herbicides and insecticides, direct seeding from fixed wing aircraft or helicopter and contract tree planting.

Foresters, Inc., 104 Black Hawk Lane, West Lafayette, Indiana. Consultants: J. C. Callahan, T. W. Beers, Clair Merritt.
Territory: Central States.
Specialization: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15, 16, 17, 18, 19, 20, 21.

Forestry Consultants, Inc., 989 South West Street, Jackson, Mississippi.
Consultants: Purvis R. Huff, *James W. Craig, and John W. Squires.

Territory: Gulf states.
Specialization: 3, 4, 13, 15, 16, 17, 18. Agents in timberland acquisition and sales. Resource analysis of prospective forest industry location.

Forestry Consulting Services, Inc., Deluxe Building, 297 West Michigan Avenue, Jackson, Michigan.
Consultant: *George D. Blair, registered forester.
Territory: Nationwide.
Specialization: 1, 2, 4, 11, 16, 19. Also various forest growth and vegetative control planning services to public utility industry.

Forestry Suppliers, Inc., Consulting Foresters and Suppliers, Battlefield Station, Jackson 4, Mississippi.
Consultants: *James W. Craig.
Territory: Gulf States.
Specialization: 3, 4, 6, 13, 15, 16, 17, 18. Also forest land analysis and management, growth studies, timber and land sales, and a complete line of supplies and equipment for foresters and timber owners.

John S. Forrest, Consulting Forester, 198 Maxwell, Eugene, Oregon.
Territory: Douglas-fir region.
Specialization: 2, 3, 4, 6, 15, 16, 17, 18. Also negotiation and administration of private timber sale contracts; aerial photography procurement contracts; property management for absentee owners; industrial inventory and sustained yield programs.

E. A. Foster, 204 E. Azalea St., Lakeland, Florida.
Territory: Southeastern United States.
Specialization: 2, 4, 5, 6, 7, 8, 13, 15, 16, 17, 18. Also design and installation of permanent forest inventory (PFI) systems using variable diameter (Bitterlich) plots (simpler and more economical than conventional CFI).

George Fox, Jr., Consulting Forester-Real Estate Appraiser, 1030 Tower Building, Little Rock, Arkansas.
Territory: Arkansas.
Specialization: 4, 8, 16, 17. Damage appraisals, condemnation, and general real estate valuation.

Harvey R. Frantz, Forest Consultant, 1926 Jennings St., Bethlehem, Pennsylvania.
Territory: Eastern United States and Latin America.
Specialization: 3, 4, 11, 13, 16, 17.

***R. C. Fraunberger**, Forest Products Business Consultant (registered forester), 626 Black Rock Road, Bryn Mawr, Pennsylvania.
Specialization: 2, 3, 4, 10, 11, 16, 17, especially in hardwoods, domestic and foreign.

E. A. Friend, Jr., 1008 Delaware Avenue, Suffolk, Virginia. (Inactive.)
Territory: Tidewater and Eastern Shore of Virginia, northeast North Carolina.
Specialization: 4, 15, 16, 17. Absentee landowners' agent, damage, trespass, and condemnation claims.

Emanuel Fritz, Consulting Forester, 102 The Uplands, Berkeley 5, California. In association with E. T. F. Wohlenberg, 37 Highland Circle, Ukiah, California.
Territory: West; pine, redwood, and fir.
Specialization: 2, 3, 4, 6, 10, 11, 16, 17, 18, 19, 20, 21.

LeRoy Frontz, Consulting Forester, Allenwood, Pennsylvania.
Territory: Eastern U. S.
Specialization: 3, 4, 5, 6, 7, 9, 16, 17, 18. Also landscaping, forest and ornamental nurseries, farm forestry, forest parks and recreation, landuse planning, soil conservation, farm evaluation and appraisal.

Charles G. Geltz Associates, Forestry and Conservation Consultants. 1521 N. W. 7th Avenue, Gainesville, Florida.
Services: Career planning, educational counselling, silvicultural surveys and promotion.
Territory: South; Registered Forester, Georgia Board of Forestry, Registration No. 97.
Specialization: Silviculture; forest nursery practices and conservation.

George I. Gentry, Forester, 3401 Middlefield Lane, Eureka, California.
Territory: California.
Specialization: 4, 17. Also contract logging supervision.

L. Neil Gilliam, 2135 Everding Street, Eureka, California.
Territory: California.
Specialization: Timber cruising, timber management, logging contracts, and timber sales.

Good Forest Management Co., Vernon A. Good, Consulting Forester, American Bank Building, Portland, Oregon.
Territory: Oregon, Washington, Idaho, northern California.
Specialization: 2, 4, 8, 13, 14, 16, 17, 18. Forest property management, timber marking, sales contracts and supervision, acquisition, aerial photo inventory, fire damage appraisals, and timber tax assistance. Also watershed and land use management.

Paul N. Goodmonson, Consulting Forester, 1355 Alta Vista Drive, Corvallis, Oregon.
Territory: Oregon, Washington, northern California.
Specialization: 3, 4, 9, 13, 15, 16, 17, 19. Complete timberland management, timber sales, timber and land acquisition, and agent for absentee forest owners.

M. W. Gormely, B.C.R.F., P. Eng., Industrial and Consulting Forestry Service, Room 413, Dominion Bldg., 207 West Hastings St., Vancouver 3, B.C.
Territory: British Columbia: (No regional limitation).
Specialization: 2, 3, 4, 5, 6, 7, 8, 10, 11, 13, 15, 16, 17, 18. Also fire damage appraisal.

***R. W. Graeber**, Consulting Forester, 303 Hillcrest Road, Raleigh, North Carolina.
Territory: North Carolina.
Specialization: 4, 6, 13, 16, 17, 18. Also buying and selling timber and timberlands as service to either buyer or seller; adjusting problems arising from over-cutting or trespass.

Joseph F. Gray, Consulting Forester, R. D. #1, Kittanning, Pennsylvania.
Territory: Pennsylvania.
Specialization: Christmas tree plantation management.

Green's Timber Service, Johnson City, Tennessee.
Consultant: L. Stanley Green.
Territory: Southeastern U. S.
Specialization: 2, 3, 4, 6, 10, 13, 16, 17, 18. Also custom sawmilling.

Greenacres, Inc., Consulting Foresters; Forest Engineering & Surveying; Timberland Brokerage.
Main Office, 6630 Rainier Avenue, Seattle 18, Washington. PArkway 5-7800 and 7801. *M. P. Lazara, general manager.
Columbia Division, 425 Second Street, Oswego, Oregon. NEptune 6-3653. Theodore R. Yocom, Division Manager.
Consultants: *M. P. Lazara, Alan C. Randall, Perry O. Donaldson, Kenneth E. Beil, T. R. Yocom, Clinton W. Morrow, J. C. H. Robertson, Ben S. Bryant, and C. S. Cowan, Fellow, SAF.
Territory: Western North America, Central and South America, Southeast Asia.
Specialization: 2, 3, 4, 5, 6, 8, 10, 11, 13, 15, 16, 17, 18, 21. Also forest investment counseling; tree farm acquisition and management. Complete feasibility studies and development plans for tropical operations. Licensed land surveying, logging planning, engineering and supervision.

W. H. Griffith, Forester and Surveyor, 1001 Ouchita Bank Building, Monroe, Louisiana.
Territory: Southern United States.
Specialization: 15, 16, 17.

Guilford Conservation Company, Consulting Foresters, Route 1, Box 171, Guilford, North Carolina.
Consultant: John C. Gambrell (Registered forester, Georgia).
Specialization: Management planning, growth studies, marketing, hardwood control, tree planting, timber cruising, and marking.

***John G. Guthrie**, Consulting Forester, Forest Management Service, Wiggins, Mississippi.
Territory: Mississippi and adjacent territory.
Specialization: 4, 6, 12, 13, 15, 16, 17, 18. Also retained as consultant-manager of private forest lands. Appraisals—land and timber. Acquisition. T.S.I., large scale planting.

Alvin B. Hafer, Consulting Forester, Laurinburg, North Carolina.
Territory: North Carolina, South Carolina, and Southeast.
Specialization: 2, 3, 4, 6, 15, 16, 17. Also purchase and sale of timbered properties.

***E. C. Haff**, Consulting Forester, 836 Edisto Ave., Orangeburg, South Carolina.
Specialization: Managing forest lands.

***Albert G. Hall and Associates**, 810 18th Street, N. W., Washington 6, D. C.
Consultant: John F. Hall (Affil. member).
Specialization: 2, 3, 4, 5, 6, 7, 8, 10, 11, 13, 16, 17, 18. Also Washington representative.

Giles G. Hall, Professional Forester, 402 Cumberland Ave., N. Augusta, South Carolina.
Territory: South Carolina, Georgia.
Specialization: 2, 3, 4, 5, 6, 7, 10, 11, 13, 16, 17, 18. Also tree pruning in planted stands.

***Jack M. Hall**, Consulting Forester, Franklin Heights, Moultrie, Georgia.
Territory: Georgia, Florida, Alabama, and South Carolina.
Specialization: 4, 5, 6, 7, 11, 12, 15, 16, 17, 18. Also contract tree planting and fire plow planting preparation.

Hanmon, Jensen, and Wallen, Mapping and Forestry Services, 660 Hegenberger Road, Oakland 21, California.
Consultants: Herbert A. Jensen, *Arnold F. Wallen.
Territory: United States, Central and South America, and foreign.
Specialization: 2, 3, 4, 6, 8, 10, 11, 13, 15, 16, 17, 18. Also planimetric and topographic mapping, land net delineation, general land classification for appraisal purposes and ranchland management, and aerial photogrammetric consulting service.

David H. Hanaburgh, Consulting Forester, Buchanan, New York.
Territory: Anywhere.
Specialization: 2, 3, 4, 9, 10, 11, 13, 16, 17. Also negotiation of rights for hunting, fishing, trapping and water storage.

Joseph F. Hardee, Consulting Forester, Route 7, Raleigh, North Carolina.
Territory: North Carolina, South Carolina, and Virginia.
Specialization: 3, 4, 13, 16, 17, 18. Also timber and timberland acquisition and sales.

P. L. Hardy, Jr., Consulting Forester, P.O. Box 682, Fredericksburg, Virginia.
Territory: Virginia and Maryland.
Specialization: 4, 13, 16, 17.

Gene M. Harris, Registered Consulting Forester, 2112 Hagan Drive, Tallahassee, Florida.
Territory: Florida, Georgia, and Alabama.
Specialization: 3, 4, 5, 6, 7, 8, 9, 12, 13, 15, 16, 17, 18.

***Arthur W. Hartman**, Consulting Forester, 525 Princeton Way, N. E., Atlanta, Georgia.
Territory: Southern states.
Specialization: 4, 6. Prescribed burning, development planning, training and execution in silvicultural uses of fire with planned management of southern pines and for control of hazardous fuels. Also, fire protection planning, especially determining components of balanced mechanized fire control facilities and their tactical uses. (Registered forester, Georgia.)

Joseph F. Havel, Box 11, Pawley's Island and Georgetown, South Carolina.
Territory: North Carolina, South Carolina, Georgia, and Florida.
Specialization: 3, 4, 10, 11, 13, 16, 17.

E. T. Hawes, Consulting Forester, 2204 White Oak Drive, Valdosta, Georgia.
Territory: Southeast.
Specialization: 2, 4, 8, 11, 12, 13, 16, 17, 18.

Ralph W. Hayes, Consulting Forester, 2241 Myrtle Avenue, Baton Rouge, Louisiana.
Territory: Gulf States.
Specialization: 2, 3, 13, 15, 16, 17. Also investigation and settlement of claims regarding timber in use in the South.

V. W. Herlevich, Consulting Forester, 802 Forest Hills Drive, Wilmington, North Carolina.
Territory: North Carolina, South Carolina.
Specialization: 4, 6, 15, 16, 17. Also forest fire damage appraisals.

***Halsey M. Hicks**, Consulting Forester, Box 575, Brattleboro, Vermont.
Territory: Not limited.
Specialization: 2, 3, 4, 8, 15, 16, 17.

***James E. Hobbs**, Consulting Forester, Edenton, North Carolina.
Territory: Southeastern United States.
Specialization: 2, 3, 4, 8, 11, 13, 16, 17.

David P. Holley, Consulting Forester, P. O. Box 232, Linden, Alabama.
Territory: Alabama and eastern Mississippi.
Specialization: 2, 3, 4, 13, 15, 16, 17.

Malcolm L. Holmes, Jr., Consulting Forester, 3425 Cheyenne Road, Raleigh, North Carolina.
Specialization: 8, 15, 18. Also land management and appraisal, timber sales and inventories, and damage surveys.

Monterey L. Holst, Consulting Forester, P. O. Box 125, East Greenwich, Rhode Island.
Specialization: 3, 4, 6, 9, 10, 13, 15, 16, 17, 18, 21.

Glon B. Hooker, 1072 Anzio St., Crescent City, California.
Territory: Northern California.
Specialization: 4, 15, 16, 17.

Douglas F. Horan, Consulting Forester, 316 Windsor Street, Lakeland, Florida.
Territory: Southeastern United States, Central and South America.
Specialization: Complete timber sales service, foreign timber investigations, agent for absentee timber owners.

William P. House, Consulting Forester, Chesham, New Hampshire (R.F.D. Marlboro.)
Territory: New Hampshire and adjacent areas.
Specialization: 2, 3, 4, 16, 17. Marking and stumpage sales.

Milford C. Howard, Forester, Box 174, 201 Dinkel Avenue, Bridgewater, Virginia.
Territory: East and South.
Specialization: 1, 2, 4, 9, 15, 16. Also acquisition and management of recreation and investment properties.

***T. M. Howerton, Jr.**, Forestry Consultant, Madison, Florida.
Territory: Southeastern states.
Specialization: Marketing, management, and forestry supplies.

John E. Hudson, 806 N. W. 21st Terrace, Gainesville, Florida, or 57 N. Bay View Avenue, Fairhope, Alabama.
Territory: Southeastern United States.
Specialization: 4, 12, 16, 17.

LeRoy W. Huntington, Consulting Tropical Forester, 870 Wesley Street, Baldwin, New York.
Territory: Latin America, Orient, Africa.
Specialization: 2, 3, 4, 10, 11, 15, 16, 17, 18; and tropical hardwoods.

Charles R. Hursh, Oldstone, Route, 3, Box 660, Asheville, North Carolina.
Specialization: Watershed management; forestry and land use as water and local climate controls. Qualified legal testimony; 5 years' foreign experience in problem areas.

R. Wilson Hutchison, Consulting Forester and Logging Engineer, 167 Walnut Lane, Eugene, Oregon.
Territory: Washington, Oregon, California.
Specialization: 2, 3, 4, 6, 10, 15, 16, 17. Registered professional engineer of the State of Oregon.

Intermountain Timber Service, 4101 State Street, Boise, Idaho.
Consultant: *Thomas C. Clifton.
Territory: Idaho, northern California, eastern Oregon.
Specialization: 2, 4, 6, 8, 15, 16, 17. Also logging road construction cost studies, and logging cost studies made. Buying and selling of timber and timberlands as a service to either buyer or seller.

Leo A. Isaac, Forest Consultant, 3520 N. E. Hancock Street, Portland 13, Oregon.
Territory: World-wide but prefer Washington and Oregon.
Specialization: 4, 18. Management of timber properties and the selection of tree seed for reforestation.

Gorham E. Jackson, Consulting Forester, 604 West Main Street, Washington, North Carolina.
Territory: Eastern North Carolina, southeastern Virginia. All forest types.
Specialization: 2, 4, 6, 9, 10, 13, 15, 16, 17, 18. Also investigations of forest resources for pulp and paper and lumber companies, and land agent for absentee timberland owners.

Alex J. Jaenicke, 2941 Mulkey St., Corvallis, Oregon.
Territory: Oregon, Washington, California, Idaho, and Montana.
Specialization: 4, 5, 7. Also volume estimates of insect- and disease-killed timber and rates of deterioration for management and taxation purposes.

M. E. Jelley, Consulting Forester, 122 Haywood Avenue, Chattanooga, Tennessee.
Territory: Southeastern and eastern states.
Specialization: 2, 3, 4, 10, 11.

David G. Jennings, Consulting Forester, 179 Carroll St., Port Jefferson Station, New York.
Territory: New York.
Specialization: 1, 3, 4, 6, 15, 18.

Hyland R. Johns, Jr., Consulting Forester, Asplundh Tree Expert Co., Jenkintown, Pennsylvania.

Territory. Nationwide.
Specialization: Arboriculture and tree preservation, street tree management, chemical control of vegetation.

***F. J. G. Johnson and Associates, Ltd.**, Suite 605, 325 Howe Street, Vancouver 1, B. C., Canada.
Territory: British Columbia (no regional limitation).
Specialization: 2, 3, 4, 6, 11, 15, 16, 17.

E. V. Jotter, Consulting Forester, 30 Cedarlawn Drive, Dayton 15, Ohio.
Territory: Ohio, Kentucky.
Specialization: 3, 4, 6, 9, 11, 16, 17, 18. Also development and management of community forests, conservation education, cooperation with soil conservation districts.

Frank E. Karpick, 130 Kay St., Buffalo, 15, New York.
Territory: Northeastern United States.
Specialization: Planning and maintenance programs for municipal shade trees.

The S. G. Keedwell Company, Consulting Foresters, Emporia, Virginia.
Territory: Eastern and southern U. S.
Specialization: 3, 4, 10, 11, 13, 15, 16, 17. Also forest litigation and purchase and sale of land and timber.

John F. Kellogg, Forester, Stonewall, Louisiana.
Territory: Louisiana; pine and hardwood.
Specialization: 4.

***George C. Kiefer, Jr.**, Consulting Forester, Salisbury, Connecticut.
Territory: Southern New England, eastern New York.
Specialization: 4, 6, 8, 15, 16, 17, 18. Also management of timber properties and plantations, timber marking and marketing, watershed management, and agent for woodland owners.

H. Thorn King, Consulting Forester and Land Surveyor, Hancock, New Hampshire.
Territory: Southwestern New Hampshire.
Specialization: 2, 3, 4, 15, 16, 17, 18. Also tree farming; marking; registered land surveyor.

Ed Knapp Company, Consulting Foresters, 4425 Pio Nono Avenue, Macon, Georgia.
Consultants: G. Ed Knapp, Donald L. Martindale (both registered foresters).
Territory: Southern states.
Specialization: 2, 3, 4, 10, 11, 13, 16, 17, 18.

***Robert F. Knoth & Company**, Foresters, Appraisers, Surveyors, 132 East Bay Street, Charleston 3, South Carolina.
Consultant: Robert F. Knoth.
Territory: Domestic and foreign.
Specialization: 4, 6, 10, 11, 13, 15, 16, 17, 18. Land agent for absentee timberland owners; foreign timberland investigations; veneer log procurement; timber acquisitions; sales, investments, and loans.

Arthur Koehler, Wood Technologist, 1959 Thayer Ave., Los Angeles 25, California.
Specialization: Wood utilization.

J. Hugo Kraemer Associates, Consulting Foresters, 249 Lark Street, Albany 10, New York.
Territory: New York and New England.
Specialization: 2, 3, 4, 6, 11, 15, 16, 17, 18, 21. Also timberland management and research projects.

Clifton LaBree, Forest Consultant, R.F.D. Wilson Hill Road, New Boston, New Hampshire.
Territory: Northeastern United States.
Specialization: 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 16, 17, 18. Also timber sales, long-term forest land leases or management contracts, and land surveying.

Paul E. Lachance, Consulting Forest Engineer, Grenier, Grenier and Lachance, 675 St. Amable Street, Quebec, P. Q., Canada.
Specialization. 6, 8, 9. Member Canadian Institute of Forestry and Empire Forestry Association.

Lake States Conservation Co., Inc., Southeastern Division, Forestry Consulting, 2908 2nd Avenue East, Tuscaloosa, Alabama.
Consultant: Peter C. Grieves.
Territory: Southeastern U. S. and Lake States.
Specialization: 2, 3, 4, 5, 6, 7, 8, 11, 15, 16, 17, 18; also contracts offered for long term management of private commercial and absentee owned forests of all sizes.

William N. Lane, Forest Management Consultant, Crown Point Road, Rochester, New Hampshire.
Territory: Northeastern United States.
Specialization: 2, 3, 4, 5, 6, 7, 8, 11, 13, 15, 16, 17, 18. Also damage surveys, forest litigation, timber depletion accounting, and timber investment reports.

The Langdale Company, P. O. Box 980, Valdosta, Georgia.
Consultants: Harley Langdale, Jr., T. E. Connell.
Territory: Georgia, northern Florida; slash pine belt.
Specialization: 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19.

***Jack E. Larson**, 5524 Elvas Avenue, Sacramento 19, California.
Consultant: Jack E. Larson.
Territory: Western states.
Specialization: 2, 3, 4, 6, 7, 8, 10, 11, 15, 16, 17, 18. Also land and timber appraisals for purchase, sale, exchange, or taxation; licensed land surveyor. Land and timber sales; logging supervision.

Joseph S. Larson, Consulting Biologist, Route 1, Box 173, Crownsville, Maryland.
Territory: New England, New York, Central Atlantic states.
Specialization: Wildlife management, forest-wildlife relationships.

D. E. Lauderburn, 1204 Adeline St., Hattiesburg, Mississippi.
Territory: Mississippi and adjacent territory.
Specialization: 2, 3, 4, 11, 12, 13, 16, 17. Timber sales service including marking, supervision, and inspection.

Frank J. Lemieux, Consulting Forester, 1015 Whitney Building, New Orleans, Louisiana.
Territory: Southern states, Mexico, Central and South America.
Specialization: 2, 4, 6, 13, 15, 16, 17.

Paul C. Lemon, Consulting Forester, State College, Albany 3, New York.
Territory: New York and New England.
Specialization: 1, 6, 9, 14. Also commercial pilot, applications of aviation to forestry.

T. A. Liefeld, Consulting Forester, Thomasville, Georgia.
Territory: Florida, Georgia.
Specialization: 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 15, 16, 17, 18.

L. D. Lloyd, Consulting Forest and Logging Engineer, Flying L Ranch, Glenwood, Washington.
Territory: Worldwide.
Specialization: 2, 3, 4, 6, 8, 10, 13, 15, 16, 17.

Stanley S. Locke, Consulting Forester, 1902 E. Wood Place, Milwaukee 11, Wisconsin.
Territory: Lake States and Upper Mississippi Valley.
Specialization: Consultant on soil-forest relations; interpretation of soil surveys for wood crop production potential; review of industrial forestry research program involving soils.

Harvey J. Loughead, Consulting Forester, 399 Vanderbilt Road, Biltmore, Station, Asheville, North Carolina.
Territory: Eastern U. S.
Specialization: 3, 4, 12, 13, 16, 17. Also watershed management.

Robert T. MacDougall, Jr., 124 Cresta Drive, Ukiah, California.
Territory: Coast pine and southern redwood regions of California.
Specialization: Timber cruising, forest management, mapping.

***Donald K. Maissurow**, Consulting Forester, New Haven Avenue, Derby, Connecticut.
Territory: New England.
Specialization: 1, 4, 15, 16, 17. Also landscape forestry.

A. R. Maris, Box 122, Forks, Washington.
Territory: Olympic Penninsula of Washington state.
Specialization: Logging engineering, timber cruising, land surveying, tree farms, and all general forestry work including land appraisals.

Carol W. Marlow, 4232 Redonda Lane, Dayton 6, Ohio.
Territory: Ohio.
Specialization: 1, 5, 7. City shade tree maintenance programs.

E. D. Marshall, Consultant in Forest Products, 403 Court Ave., Ventura, California.
Territory: Western United States, Mexico, Central and South America.

Specialization: 3, 4, 11, 13, 16, 17, 19. 20, 21.

Raymond H. Marshall, Consulting Forester and Land Surveyor, 5 Pine Street, Littleton, New Hampshire.
Territory: Northern New Hampshire and Vermont.
Specialization: 3, 4, 6, 13, 15, 16, 17, 18.

Clyde S. Martin, Forest Consultant, 902 Puget Sound Bank Building, Tacoma 2, Washington.
Territory: Western United States and Canada.
Specialization: 2, 4, 6, 7, 8, 10, 15, 16, 17.

William Maughan, Consulting Forester, 5 Sylvan Road, Durham, North Carolina.
Territory: Southeastern United States.
Specialization: 2, 3, 4, 8, 16, 17, 18.

Edward A. McAllister, 311 Lynchburg Avenue, Colonial Heights, Virginia.
Territory: Virginia and Southeast.
Specialization: 3, 4, 9, 10, 11, 13, 16, 17.

Earl M. McChesney, Consulting Forester, Box 261, 57 New York Street, Bangor, Maine.
Specialization: 1, 4, 15, 16, 17, 18.

John McNair & Associates, 1805 W. Main Street, Waynesboro, Virginia.
Consultant: John W. McNair, Jr.
Territory: Eastern and southern United States.
Specialization: 2, 10, 15. Also design and construction supervision of roads, bridges, and dams. (Registered professional civil engineer).

The Ben Meadows Co., 315 Pharr Road, N. E., Atlanta, Georgia.
Consultant: *Ben C. Meadows.
Territory: Southeast.
Specialization: 4, 11, 13, 16, 17. Also complete line of forestry tools and equipment for the forester and timber owner.

***James W. Meteer,** Consulting Forester, R. D. 6, Wooster, Ohio.
Territory: Not limited.
Specialization: 2, 3, 4, 11, 16, 17, 18. Also Christmas tree management. Specialist in continuous forest inventory.

Richard V. Miles, & Associates, Forestry Consultants—Real Estate Brokers, 1006 First National Bank Bldg., Tuscaloosa, Alabama.
Specialization: 4, 8, 11, 13, 15, 16, 17, 18.

Frank J. Miller, Consulting Forester, 1234 Brooks Avenue, Raleigh, North Carolina.
Territory: North Carolina and southeastern United States.
Specialization: 3, 4, 6, 8, 13, 15, 16, 18. (Registered land surveyor, North Carolina).

Raymond M. Miller, Consulting Forester, P. O. Box 802, Jamestown, New York.
Territory: Pennsylvania, New York.
Specialization: 4, 16, 17. Also timber and lumber marketing service.

Milliken Forestry Co., P. O. Box 5405, 500 Beltline Blvd., Columbia, South Carolina.
Consulting foresters: William F. Milliken, K. M. Allan, James R. Cathcart, Hugh M. Lupold.
Territory: Southeast, principally South Carolina.
Specialization: 3, 4, 6, 11, 13, 15, 16, 17, 18. Also tree planting; agent for absentee owners; hardwood-pine conversion work.

Walter L. Mills, Forester, 2308 Church Street, P. O. Box 21, Selma, Alabama.
Territory: Southeast.
Specialization: 2, 3, 4, 5, 6, 7, 10, 13, 16, 17, 18.

***William J. Mills,** Forest Engineer, 201 Volunteer Building, Chattanooga 2, Tennessee.
Territory: Southeastern states, Mexico.
Specialization: 3, 4, 11, 13, 15, 16, 17.

R. B. Milne, Consulting Forester, Box 371, Petersburg, Virginia.
Territory: Eastern states; all forest types.
Specialization: 3, 4, 8, 10, 11, 13, 16, 17, 18.

Stuart Moir, Forest Counsel, Diamond Head Road, Oswego, Oregon.
Territory: Western United States, British Columbia, Canada.

***Robert Moore,** Consulting Forester, Danville, Pennsylvania.
Territory: Not restricted.
Specialization: 2, 3, 4, 6, 8, 10, 11, 13, 15, 16, 17, 18, 19. Also bankruptcy cases, trade association work, land purchase and sales, timber buying, selling, and appraising. Licensed real estate broker. Trusteeship cases, litigation and damage claims, estate problems.

R. A. Morin, Consulting Forester, 2532 Sunset Ave., Greenville, North Carolina.
Territory: Eastern North Carolina.
Specialization: 4, 10, 13, 16, 17, 18. Also growth studies, timber marking and marketing, and agent for absentee timberland owners.

George W. Morrill, Jr., Consulting Forester, R. F. D. #3, Concord, New Hampshire.
Territory: New Hampshire, Maine, Vermont.
Specialization: 4, 13, 15, 16, 18. Also landscaping, forest recreation, and beautification.

***Peter R. Mount,** Consulting Forester, Route #3, Kingston Springs, Tennessee.
Territory: Kentucky-Tennessee, Tennessee River Valley.
Specialization: 2, 3, 4, 8, 10, 11, 15, 16, 17, 18.

Mountain Forestry Co., Inc., 41 Jackson Street, Berea, Kentucky.
Consultants: Robert H. King and Associates.
Territory: Kentucky, West Virginia, southern Ohio and Indiana, and eastern Tennessee.
Specialization: 1, 2, 3, 4, 6, 10, 16, 17, 18, 20. Also forest investment consulting and photo interpretation.

Charles H. Moyer, Consulting Forester, R. F. D. #2, Newfield, New York.
Territory: Northeast.
Specialization: 4, 10, 15, 16, 17.

National Timber Consultants, Box 497, Salem, Missouri.
Consultants: Ed Woods, Charles Kirk.
Territory: Central and southern states.
Specialization: Management information, land appraisal and valuation, mapping and estimating.

Chris Nelson, Jr., Consulting Forester, 132 West Crockett St., Jasper, Texas.
Territory: Southern and southwestern United States and tropical America.
Specialization: 3, 4, 16, 17, 18.

New England Forestry Foundation, 41 Mount Vernon Street, Boston 8, Massachusetts.
Consultants: *J. Milton Attridge, Stanley B. Coville, Kenneth E. Jones, Allan W. Plumb, Donald R. Poppema, Fred A. Huntress, Jr., James Philip Rich.
Territory: New England.
Specialization: 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, 18.

New England Silvicultural Service, Athol Road, Petersham, Massachusetts.
Consultant: Fred M. Hunt.
Territory: Central New England.
Specialization: 4, 10, 15, 16, 17, 18. Also management of pine plantations.

S. A. Newman, Forest Engineers, P. O. Box 156, Everett, Washington.
Territory: Washington.
Specialization: 8, 10, 15, 16, 17.

***Leon A. Nix,** Consulting Forester and Logging Engineer, 260 N. Main St., Brampton, Ontario, Canada.
Territory: Not limited.
Specialization: 2, 3, 4, 6, 10, 13, 15, 16, 17. Also farm woodlot management.

Northeast Forestry Service, Inc., R. D. #1, Hawley, Pennsylvania.
Stanley Mesavage, Chief forester.
Territory: New York, New Jersey, and Pennsylvania.
Specialization: 3, 4, 10, 11, 15, 16, 17.

Northern Timber Services, Curtis R. Lytle, Consulting Forester, Box 365, Wellsboro, Pennsylvania.
Territory: North central Pennsylvania.
Specialization: 4. Also sugar-bush and Christmas tree management.

Ernest Nutting, Consulting Forester, Box 51, Camden, South Carolina.
Territory: The Carolinas and Georgia.
Specialization: 4, 8, 13, 15, 16, 17, 18.

***H. R. Oliver**—Consultant, Doing Business as Forest Products Management Services, 1504 Broad Street, Camden, South Carolina.
Territory: Southern and eastern states.
Specialization: 2, 3, 4, 6, 7, 11, 15, 16, 17, 18. Also land appraisals, timber and land sales and bottomland hardwood management.

W. R. Owens, Consulting Forester, 3902 North Street, Nacogdoches, Texas.
Territory: Texas, Louisiana, Arkansas, Oklahoma, New Mexico.
Specialization: 15, 16, 17. Complete timber management, investigations for legal actions involving timber or timberland. Also registered public surveyor.

***Charles R. Page, Jr. and Associates,** Forest Land Managers and Consultants, 913 Harris Lane, Chattanooga 11, Tennessee.
Territory: Southeastern states.
Specialization: 3, 4, 5, 6, 7, 11, 15, 16, 17, 18.

Pan American Timber Services, 230 Parnassus Avenue, San Francisco 17, California.
Consultant: Peter Arnold.
Territory: Latin America and tropics.
Specialization: 2, 3, 4, 8, 10, 11, 13, 16, 17, 18, especially as they apply to the Latin American areas. Fluent in Spanish, Portuguese.

Jim H. Panter, Consulting Forester, Hillcrest at Langham St., P. O. Box 469, Thomson, Georgia.
Territory: Georgia and adjoining states.
Specialization: 2, 4, 9, 13, 15, 16, 17. Also timber cruising, selective marking, timber management and inventories including growth data. Agent for absentee landowners as consultant-manager. Preparation, negotiation, or advertisement and administration of timber sales for large and small timber landowners. Cutting supervision and boundary line establishment. Purchases and sale of timbered properties.

Benson H. Paul, Timber growth-quality, consultant, 1118 University Bay Dr., Madison 5, Wisconsin.
Territory: Not limited.
Specialization: 1, 3, 4, 11, 17, 21. Also silvicultural control of specific gravity for special products and uses; species quality comparisons and evaluations; preparation and presentation of reports for species promotion; lectures and seminars.

Henry J. Perry, Management Consultant, 99 Lake Street, Wilson, New York.
Pulp-paper-allied industries
Raw materials; economic feasibility; costs; operations; marketing; process and product development. Overseas studies, a specialty.

Pomeroy & McGowin, Forest Managers, Monticello, Arkansas, and Chapman, Alabama.
Consultants: L. K. Pomeroy, Julian F. McGowin (S.A.F. Associate Member), T. R. Scott, Jr., W. V. Gandy, D. W. Samson, D. L. Harper and H. C. Pennington.
Territory: Southern states, South America.
Specialization: 4, 8, 11, 13, 16, 17, 18. Also aerial forest surveys.

Pond & Moyer, Inc., Co., Consulting Foresters, 634 Hillside Drive, Lakeland, Florida.
Consultant: *James D. Pond.
Territory, New York and Northeast, Latin America, northern hardwoods, spruce-fir, central hardwoods, tropical woods.
Specialization: 2, 3, 4, 8, 10, 11, 13, 15, 16, 17. Also damage and trespass appraisals.

Prentiss & Carlisle Company, Inc., Timberland Service — Engineers, 107 Court Street, Bangor, Maine.
Consultants: Philip P. Clement, Robert W. Averill, and William D. Barron.
Territory: United States, Canada.
Specialization: 2, 3, 4, 8, 10, 11, 13, 15, 16, 17, 18.

W. H. Price, Forest Consultant, 2626 West Lynn Street, Seattle 99, Washington.
Specialization: 1, 4, 6, 7, 8, 16, 17.

John G. Rawls Co., Consulting Foresters, 2793 Pinewood Drive, Macon, Georgia.
Consultant: John G. Rawls (S.A.F. Affiliate Member).
Territory: Southeast.
Specialization: 10, 12, 13, 15, 16, 17.

A. B. Recknagel, P. O. Box 15, Ithaca, New York.
Territory: Anywhere in United States and British Columbia.
Specialization: Forest management, forest utilization (particularly pulp and paper).

Hugh S. Redding, Consultant, P. O. Box 256, Leesville, Louisiana.
Experience: 8 years private industry forestry, N.W. U. S.; 37 years U.S.F.S. N.W. and South.
Specialization: Forest management advice and consultation

***Tom Reimer,** Forestry Consultant, P.O. Box 395, Albany, Georgia.
Specialization: 2, 3, 4, 8, 10, 11, 12, 13, 15, 16, 17, 18.

Owen L. Riley and Assoc., Forest Managers and Consultants, P. O. Box 31, Pine Mt. Valley, Georgia.
Consultants: *Owen L. Riley, Hugh P. Riley.
Territory: Georgia and Alabama.
Specialization: 4, 6, 7, 9, 11, 16, 17, 18. Also agent for timberland owners: timber marketing and assistance; damage appraisal.

F. Herbert Robertson, Consulting Forester, 1026 W. Eighth Street, Panama City, Florida. Phone: POplar 3-5049.
Territory: Alabama, Georgia, Florida.
Specialization: 4, 5, 6, 7, 8, 3, 16, 18. Also reforestation, brokerage in standing timber. Purchase and sale of timberd properties. Agent for absentee forest land owners. Forest tree seed sales.

James A. Rogers, Consulting Forester, P. O. Box 3, San Pedro Sula, Honduras, C. A.
Territory: Central America and southern states.
Specialization: 2, 3, 4, 6, 10, 11, 13, 16, 17, 18.

A. P. Russell, Consulting Forester, 11 Maplewood Drive, Sumter, South Carolina.
Territory: Unlimited, principally southern region.
Specialization: 2, 3, 4, 10, 11, 13, 15, 16, 17, 18. Also forest resource surveys for industry, specializing in southern hardwoods.

Sable Mountain Corporation, 68 Phillips Street, Rutland, Vermont.
Consultants: *Richard C. Rose, Benjamin F. Hoffman, Jr., William E. Bradder.
Territory: Central Vermont.
Specialization: 4, 15, 16, 17, 18. Also complete woodland management, including marking and marketing of standing timber and trained work crew for planting, pruning, and timber stand improvement. Also operate own forest.

Eino Sainio, Consulting Forester, 209 W. Truman Avenue, Newberry, Michigan.
Territory: Eastern Upper Peninsula of Michigan.
Specialization: 3, 4, 13, 15, 16, 17. Registered land surveyor and registered forester.

Valentin Sajor, 101 Kanlaon Street, Quezon City, Philippines.
Territory; Nationwide; Philippines.
Specialization: 1, 4, 14, 15, 16, 18. Also grazing, landscaping, and tree farming.

***Paul M. Sanders,** Consulting Forester, 916 Yeon Bldg., Portland 4, Oregon.
Territory: Unrestricted.
Specialization: 2, 4, 6, 8, 15, 16, 17, 18. Property management for absentee owners.

Roy Dale Sanders, Visual Education Technician, Rural Route 6, Evrodale, Brainerd, Minnesota.
Territory: Unlimited.
Specialization: Forester, wildlife technician, photographer. The entire production supervision of 16 millimeter color educational motion pictures, including script writing, direction, photography, editing, and sound supervision. Also production of color and black and white still picture visual education material.

Sandhill Forestry Company, Box 1138, Rockingham, North Carolina.
Consultant: *Walter J. Marshburn, Jr.
Territory: Southeastern United States.
Specialization: 3, 4, 6, 13, 16, 17, 18. Also woodland property sales.

***L. E. Sawyer,** R. R. #1, West Terre Haute, Indiana.
Territory: Indiana, Illinois, western Kentucky.
Specialization: 4, 5, 6, 7, 16, 17, 18.

Joseph A. Schmidt, Consulting Forester, Box 470, Charleston, South Carolina.
Territory: Southeast.
Specialization: 4, 13, 15, 16, 17. Also growth studies, timber marking.

William R. Schofield, Forest Engineer & licensed Civil Engineer, 681 Market Street, San Francisco 5, California.
Territory: California.
Specialization: 5, 6, 7, 8, 15, 16, 18.

C. D. Schultz & Co., Inc., Forestry and Engineering Consultants, 545 White-Henry-Stuart Building, Seattle, Washington.
Consultant: C. D. Schultz.
Territory: Arizona, Oregon, Washington, California mainly; but no regional limitations.
Specialization: 2, 3, 4, 6, 8, 10, 11, 15, 16, 17, 18, 20.

C. D. Schultz & Co., Ltd., Forestry and Engineering Consultants, 325 Howe Street, Vancouver, British Columbia.
Consultants: C. D. Schultz and 4 members of the Canadian Institute of Forestry. Present staff 5 members and 10 associates.
Territory: No regional limitations.
Specialization: 2, 3, 4, 6, 8, 10, 11, 13, 15, 16, 17, 18, 19, 20.

***Charles M. Schwartz,** Consulting Forester, 3765 Wendy Court, Silver Spring, Maryland.
Territory: Maryland and Virginia.
Specialization: 3, 4, 8, 11, 13, 16, 17, 18.

***Thomas F. Schweigert,** Consulting Forester, Penney Building, Petoskey, Michigan.
Territory: Michigan.
Specialization: 4, 8, 15, 16, 17, 18. Registered forester, registered land surveyor.

James W. Sewall Company, Consulting Foresters, Old Town, Maine, and Fredericton, New Brunswick, Canada.
Consultants: Frank M. Call, Charles Slight, Carleton C. Young, Jr., Theodore C. Tryon, Earl W. Raymond.
Territory: Northeast.
Specialization: 3, 4, 5, 8, 13, 15, 16, 17, 18. Also aerial photography.

R. B. Shannon & Associates, Professional consulting; Engineers, Surveyors, Foresters, Landscape Architects, Box 23, Kittanning, Pennsylvania; also Indiana, Pennsylvania.
Consultant: *Robert B. Shannon.
Territory: Pennsylvania, New York, Ohio, West Virginia.
Specialization: 2, 4, 15, 16, 17, 18. Also timber damage appraisals; photogrammetric cartography, civil engineering.

Walter W. Simonds, Consulting Forester, 500 E. Prospect Avenue, State College, Pennsylvania.
Territory: Northeastern states.
Specialization: Christmas trees; forest nurseries; appraisals; estimating, and management.

William R. Sizemore & Co., Foresters, Surveyors, and Land Managers, Tallassee, Alabama.
Consultants: William R. Sizemore, and Mary H. Sizemore (S.A.F. Associate Member).
Territory: Southeast.
Specialization: 2, 3, 4, 8, 11, 13, 15, 16, 17, 18.

Samuel S. Snook, P. O. Box 521, Walterboro, South Carolina.
Territory: South Carolina.
Specialization: 4, 15, 16, 17.

James B. Snowden, Consulting Forester, Route #3, Quincy, Florida. Phone: MAin 7-6093.
Territory: Florida, Georgia, and southeast Alabama.
Specialization: 4, 5, 6, 7, 12, 16, and 17.

Dean Solinsky, Hobart Bldg., San Francisco 4, California.
Territory: California.
Specialization: Timberland appraisals and management.

***Seymour I. Somberg,** 920 Monmouth Avenue, Durham, North Carolina. Phone 68-2-7993.
Territory: Southeastern U. S. and Latin, Central, and South America.
Specialization: 2, 3, 4, 8, 10, 11, 13, 15, 16, 17, 20. Acquisition and management for investors; forest resource surveys for industry.

South Carolina Forest Management Service, Box 97, Eutawville, South Carolina.
Forest Consultant: Hugo J. Pawek.
Territory: West Virginia, Virginia, North Carolina, South Carolina, Tennessee, Georgia, Florida, and Alabama.
Specialization: 3, 4, 5, 6, 7, 16, 17.

Southern Timber Company, Inc., Consulting Foresters, Box 421, Camden, Arkansas.
Consultant: Randall L. Leister.
Territory: Arkansas and north Louisiana.
Specialization: 1, 3, 4, 11, 13, 15, 16, 17, 18. Also manage forest land as a service under contract.

Southern Timber Management Service, Home Office, P. O. Box 7527, Birmingham 13, Alabama. Branch Offices, 404 Montgomery Avenue, Sheffield, Alabama; 138 W. Magnolia Avenue, Auburn, Alabama; P. O. Box 564, Brookhaven, Mississippi, and 703 James Blvd., Signal Mountain, Tennessee.
Consultants: *J. M. Bradley, W. H. Mullins, H. E. Murphy, C. B. Umland, Tom Newman, George Henker, Kenneth Hotopp, Guy Parsons, and John White.
Territory: South, Central Atlantic, and South America.
Specialization: 1, 2, 3, 4, 8, 10, 11, 12, 13, 15, 16, 17, 18, 21. Also acting as timberland investment counsel and land agent and forester in charge for private, commercial, and absentee-owned timberlands of all sizes with optional complete timber stand improvement cutting, milling, and T.S.I. operations as a service under contract. Contracted objectives under long-range management contract offered. Resource surveys and industrial plant location services. Forest tree seed, wholesale and retail. Direct seeding and chemical hardwood spray control.

Frank Spearey, Consulting Forester, Registered Public Surveyor, P. O. Box 1249, Jacksonville, Texas.
Territory: Gulf States.
Specialization: 4, 15, 16, 17. All phases of land management.

Wallace R. Stacy, Consulting Forester, P. O. Box 21, Walterboro, South Carolina.
Territory: Within 100 miles of Walterboro.
Specialization: 3, 4, 6, 7, 13, 16, 17, 18. Also growth studies, timber marking, fire damage appraisals, forest mapping, timber trespass appraisals, pulpwood and timber sales, timberland agent for absentee timberland owners, tree planting.

T. J. Starker and Son, 3855 Van Buren Street, Corvallis, Oregon.
Operating consultants: T. J. Starker, Bruce Starker.
Territory: Oregon.
Specialization: 1, 3, 4, 10, 16, 19, 21.

***J. F. Stauss,** Consulting Forester, 9 Nowlan Road, Hillcrest, Binghamton, New York.
Territory: Northeast and Canada.
Specialization: 2, 3, 4, 8, 10, 11, 13, 15, 16, 17, 18. Also marketing and other forest products; litigation and damage claims.

Charles T. Stealey, Jr., Consulting Forester, 1505 N. Roberson, Conroe, Texas.
Territory: Texas and surrounding states.
Specialization: 4, 6, 7, 13, 16, 17, 18.

***Edward F. Steigerwaldt,** Consultant Forester, Route 2, Tomahawk, Wisconsin.
Territory: Lake States.
Specialization: 4, 8, 11, 13, 15, 16, 17, 18. Also aerial photography plans, forest surveys, forest photography, photo interpretation, and property management for absentee land owners.

Stevens Forestry Service, Consulting Foresters, Box 1070, El Dorado, Arkansas.
Consultants: *Irwin E. Stevens, Jim W. Bottoms.
Territory: Southern states.
Specialization: 1, 3, 4, 11, 13, 15, 16, 17, 18.

Raymond E. Stevens, Consulting Forester, 4416 McCulloch Street, Duluth 4, Minnesota.
Territory: Northern parts of Minnesota, Wisconsin.
Specialization: 4, 15, 16, 17, 18. Also field investigation and forest litigation.

John W. Stock, Consulting Forester and Licensed Land Surveyor, Tupper Lake, New York.
Territory: Adirondack Mountains.
Specialization: 3, 4, 10, 15, 16.

William S. Stover, 6178 Louisville Street, New Orleans 24, Louisiana.
Territory: Not limited.
Specialization: Forest resource and related investigations; design and planning of forest inventories, and other studies.

W. W. Talbert, Forest Consultant, 1707 Lotus Lane, Lufkin, Texas.
Territory: Texas and surrounding states.
Specialization: 4, 6, 16, 17, 18.

M. W. Talbot, Consultant in Range and Watershed Management, 2590 Cedar Street, Berkeley 8, California.
Territory: Not limited.
Specialization: 14, Evaluation surveys and studies of land condition and management.

Tex-La Land Management Service, P. O. Box 38, Jasper, Texas.
Consultant: *A. C. Bace, Jr.
Territory East Texas and western Louisiana.
Specialization: 3, 4, 5, 6, 7, 11, 13, 16, 17. Also acting as land and forest managers for private, commercial, and absentee-owned timberlands as a service under contract.

Harley H. Thomas, Jr., Forest Consultant, 101 Green Street, Doniphan, Missouri.
Territory: Arkansas, Illinois, Missouri.
Specialization: 4, 6, 9, 15, 16, 17. Also agent for absentee owners.

Thaddeus Thorne, Consulting Forester, Center Conway, New Hampshire.
Territory: Northeast.
Specialization: 2, 4, 15, 16, 17, 18. Timber sales, marking, forestland real estate.

Tillinghast & Reed, Consulting Foresters, Danville, West Virginia, Phone: Madison, West Virginia, 771.
Consultants: *John Tillinghast, *Marvin Reed, O. O. Neely, Jr.
Territory: West Virginia, eastern Kentucky, western Virginia.
Specialization: 3, 4, 6, 15, 17, 18, 19, 20. Timberlands in coal-producing areas a specialty; services available on job basis or on annual retainer fee. Also dealers and distributors forestry equipment.

J. M. Tinker, Forester and Realtor, 30 Seibald Street, Statesboro, Georgia.
Territory: Savannah trade area.
Specialization: Timber estimates and sales, timberland appraisals and sales, management plans.

Anton J. Tomasek, 258 E. Briarwood Lane, Palatine, Illinois.
Territory: Illinois, Indiana, Michigan, and Wisconsin.

Specialization: 3, 4, 9, 11, 16, 18. Also tree diseases and insects, forest recreational development.

Tree Farm Management Service, Inc., 1166 7th Avenue West, Eugene, Oregon.
Consultants: *Verne D. Bronson, chief forester; *Lyle H. Seymour, Douglas B. Watson, Nicholas J. Kirkmire.
Territory: Not limited.
Specialization: 2, 3, 4, 5, 6, 7, 8, 9, 13, 15, 16, 17, 18. Complete tree farm management, inventory and special studies of forest lands, salvage harvest supervision, forestry research, aerial photo procurement and interpretation. Also forestry contractors doing tree planting and second growth thinning.

J. N. Van Alstine, Consulting Forester, Stark Road, Center Conway, New Hampshire.
Territory: Appalachians, Blue Ridge, Northeast.
Specialization: 4, 15, 17. Also land capability classification for timber, hydrology, wildlife, minerals, and timber quality.

Van Vliet and McKimmy, Forest Products Specialists, 2425 Hayes Street, Corvallis, Oregon.
Consultants: A. C. Van Vliet and M. D. McKimmy.
Territory: Oregon, Washington, and California.
Specialization: 3, 11, 19, 20, 21. Also industrial engineering applications, feasibility studies, production and quality control techniques, and analysis of specific problems related to wood properties in the production of forest products.

James M. Vardaman & Company, First National Bank Bldg., Laurel, Mississippi.
Consultant: James M. Vardaman.
Territory: Southeastern United States.
Specialization: 16, 17. Also own and operate medium-sized tree farm.

Vermontwoods, Inc., Forest Management, 19 Crescent Street, Rutland, Vermont.
Consultant: Frederic P. Elwert.
Territory: Southern Vermont and eastern Adirondacks.
Specialization: 4, 8, 15. Forest improvement work and timber sales under professional supervision.

W. T. S. Inc., Arcata Hotel, Arcata, California.
Consultants: *Robert E. Kleiner, Frank F. Schmidt, Jarrold B. Cone.
Territory: Not restricted.
Specialization: 2, 4, 8, 10, 15, 16, 17, 18.

Myron Wall & Associates, Foresters and General Appraisers, P. O. Box 269, Tahoe City, California.
Consultant: Myron Wall.
Territory: California, Nevada, Idaho, Arizona, New Mexico, Colorado, southern Oregon, Montana, and the Dakotas.
Specialization: 2, 3, 4, 5, 6, 7, 8, 10, 15, 16, 17, 18, 19, 20, 21. Also are associated with Marshall & Stevens, valuation engineers in the practice of general appraising, i.e. commercial, residential, rural, industrial, etc., for market value, taxation, purchase & sale, insurance, condemnation, refinancing and economic purposes. In addition we handle land and timber sales, provide logging supervision and scaling services.

George E. Warren, P. O. Box 335, Sylvester, Georgia.
Specialization: 4, 6, 12, 13, 15, (registered land surveyor) 16, 17 and

Robert D. Washburn, Forestry Consultant, Route 2, Box 26, Marquette, Michigan.
Territory: Upper Michigan and the Lake States.
Specialization: 2, 4, 10, 15, 16, 17. Also land appraisal. Registered surveyor, registered forester, State of Michigan, and real estate broker-appraiser.

Arthur J. Weinheimer, Consulting Forester, R.F.D. # 1, Old Chatham, New York.
Territory: Eastern New York.
Specialization: 4, 18.

***Henry Wessel**, Attorney at Law, 1015 Western Savings Fund Bldg., Broad and Chestnut Streets, Philadelphia 7, Pennsylvania.
Territory: Northeast and Middle Atlantic Region.
Specialization: 2, 8, 11, 15, 16, 17. Also general business problems including the formation of partnerships, corporations, financing and litigation; timber sales, probate work, estate planning and taxation.

***J Atwood Whitman**, Consulting Forester, Glendon, North Carolina.
Territory: Eastern and southern United States.
Specialization: 2, 3, 4, 8, 15, 16, 17, 18. Also forest damage appraisal, forest litigation, growth analysis, timber type maps and municipal forestry.

S. A. Wilde, Soils Department, University of Wisconsin, Madison 6, Wisconsin.
Territory: Wisconsin, Minnesota, Michigan, Missouri, Illinois, Indiana, Ohio.
Specialization: 18. Including survey of forest tracts, selection of planting sites, management of forest nursery soils, particularly restoration of fertility in depleted and biocide-treated nursery soils.

Gerald H. Williams, Consulting Forester, 12 Hersh Avenue, Westminster, Maryland.
Territory: Delaware, New Jersey, Pennsylvania, Virginia, and West Virginia.
Specialization: 3, 4, 13, 16, 17.

H. W. Williams, Jr., Consulting Forester, 700 Scruggs Street, Waycross, Georgia.
Specialization: 4, 16, 17.

John F. Williams & Co., Foresters, Windsor, North Carolina.
Territory: Southeastern U. S.
Specialization: 2, 3, 4, 13, 15, 16, 17 with emphasis on forest management and tree planting.

S. Leigh Wilson, Consulting Forester, 713 South Irby St., Florence, South Carolina.
Consultants: S. Leigh Wilson, and Don M. Handley.
Specialization: 3, 4, 16, 17, 18.

Fred E. Winch, Jr., Consulting Forester, Sebring Road, R. 2, Newfield, New York.
Territory: Northeast.
Specialization: 4, 11, 18. Primarily associated with maple sirup and Christmas tree production.

Jack E. Winn, Consulting Forester, 3544 South Quince, Olympia, Washington, Phone Fleetwood 2-0465.
Territory: Pacific Northwest.
Specialization: 2, 4, 6, 13, 16, 17, 18. Twenty-one years' experience in development of tree farms, stumpage sales, marketing, selective marking and logging, logging contracts, timber appraisal, forest inventory, timber cruising and trustships. References.

Paul T. Winslow, Consulting Forester, Staatsburg, Duchess County, New York.
Territory: Northeast.
Specialization: 1, 3, 4, 11, 15, 16, 17, 18.

E. T. F. Wohlenberg, Consulting Forester, P. O. Box 246, Ukiah, California.
Associated with Emanuel Fritz, Consultant, 102 The Uplands, Berkeley 5, California.
Territory: (The West); pine, redwood, and fir.
Specialization: 2, 3, 4, 6, 7, 8, 10, 11, 13, 16, 17, 18.

K. B. Wood and Associates, Inc., 601 Dekum Bldg., Portland 4, Oregon.
Territory: National.
Specialization: 2, 10, 15, 16, and 17.

J. E. Woodman, Barnett Bank Building, Jacksonville 2, Florida.
Territory: Eastern United States and Canada.
Specialization: 2, 4, 8, 12, 13, 16.

Herman Work, 200 N. Market St., Staunton, Virginia.
Territory: General.
Specialization: 2, 3, 4, 6, 11, 13, 16.

Robert E. Worthington, Consulting Forester, Quilcene, Washington.
Territory: Olympic Peninsula.
Specialization: 2, 10, 15, 16, 17. Also registered professional engineer and land surveyor.

E. A. Ziegler, Consulting Forester, College Park, Lewisburg, Pennsylvania.
Territory: Middle Atlantic states and Southeastern states to and including Florida.
Specialization: 2, 3, 4, 6, 8, 12, 13, 15, 16, 17, 18.

CONSULTING FORESTERS, CLASSIFIED BY STATES

Alabama
Glenn O. Antonie
David P. Holley
Lake States Con. Co.
Richard V. Miles & Assoc.
Walter L. Mills
William R. Sizemore & Co.
Southern Timber Management Service

Arkansas
Ark-La-Tex
George Fox, Jr.
Pomeroy & McGowin
Southern Timber Co.
Stevens Forestry Service

California
Airview Specialists Corp.
James E. Asher
Russell W. Beeson
Charles H. Bunting
Cal-Pacific
Emanuel Fritz
George I. Gentry
L. Neil Gilliam
Hammon, Jensen, and Wallen
Gion B. Hooker
Arthur Koehler
Jack E. Larson
Robert T. MacDougall, Jr.
E. D. Marshall
Pan American Timber Services
William R. Schofield
Dean Solinsky
M. W. Talbot
W. T. S. Inc.
Myron Wall & Assoc.
E. T. F. Wohlenberg

Connecticut
Connwood, Inc.
George C. Kiefer, Jr.
Donald K. Maissurow

District of Columbia
Albert G. Hall & Associates

Florida
John T. Clark
Francis H. Clifton
E. A. Foster
Charles G. Geltz Assoc.
Gene M. Harris
Douglas F. Horan
T. M. Howerton, Jr.
John E. Hudson
Pond & Moyer, Inc.
F. Herbert Robertson
James B. Snowden
J. E. Woodman

Georgia
W. R. Barnhill
Ira L. Bray
Edward J. Clancy
Forest Services, Inc.
Jack M. Hall
Arthur W. Hartman
E. T. Hawes
Ed Knapp Co.
The Langdale Company
T. A. Liefeld
The Ben Meadows Co.
Jim H. Panter
John G. Rawls
Tom Reimer
Owen L. Riley & Assoc.
J. M. Tinker
George E. Warren
H. W. Williams, Jr.

Idaho
Intermountain Timber Service

Illinois
Anton J. Tomasek

Indiana
Carl M. Carpenter
Foresters, Inc.
L. E. Sawyer

Kentucky
Dudley C. Carey
John M. Crowl
Mountain Forestry Co.

Louisiana
Henry L. Bango
Frank W. Bennett & Associates
Farmcraft Associates, Inc.
W. H. Griffith
Ralph W. Hayes
John F. Kellogg
Frank J. Lemieux
Hugh S. Redding
William S. Stover

Maine
Philip T. Coolidge
Earl M. McChesney
Prentiss & Carlisle Company, Inc.
James W. Sewall Company

Maryland
John F. Davis
Ivan M. Elchibegoff
Joseph S. Larson
Charles M. Schwartz
Gerald H. Williams

Massachusetts
New England Forestry Foundation
New England Silvicultural Service

Michigan
Harold R. Bruning
Forestry Consulting Services, Inc.
Eino Sainio
Thomas F. Schweigert
Robert D. Washburn

Minnesota
Roy Dale Sanders
Raymond E. Stevens

Mississippi
Keith Cranston
Randle J. Dedeaux
Forestry Consultants
Forestry Suppliers, Inc.
John G. Guthrie
D. E. Lauderburn
James M. Vardaman & Co.

Missouri
National Timber Consultants
Harley H. Thomas, Jr.

New Hampshire
Paul E. Bruns
William P. House
H. Thorn King
Clifton LaBree
William N. Lane
Raymond H. Marshall
George W. Morrill, Jr.
Thaddeus Thorne
J. N. Van Alstine

New Jersey
Felsa Co.

New York
Adirondack Forestry, Inc.
Curtis H. Bauer
Allen W. Bratton
Nelson C. Brown
Capital Forestry Co.
David B. Cook
John R. Curry
David S. Findlay
David H. Hanaburgh
LeRoy W. Huntington
David G. Jennings
Frank E. Karpick
J. Hugo Kraemer
Paul C. Lemon
Raymond M. Miller
Charles H. Moyer
Henry J. Perry
A. B. Recknagel
J. F. Stauss
John W. Stock
Arthur J. Weinheimer
Fred E. Winch, Jr.
Paul T. Winslow

North Carolina
Thos. W. Alexander
Atlantic States Forestry Co.
T. S. Coile, Inc.
Commercial Foresters, Inc.
Porcius F. Crank
Davison Timber Mgn.
Elwood L. Demmon
James B. Ebert
R. W. Graeber
Guilford Con. Co.
Alvin B. Hafer
Joseph F. Hardee
V. W. Herlevich
James E. Hobbs
Malcolm L. Holmes, Jr.
Gorham E. Jackson
Charles R. Hursh
Harvey J. Loughead
William Maughan
Frank J. Miller
R. A. Morin
Sandhill Forestry Co.
Seymour I. Somberg
J. Atwood Whitman
John F. Williams & Co.

Ohio
William J. Bozett
E. V. Jotter
Carol W. Marlow
James V. Meteer

Oregon
Bigley and Feiss
Brown and Brown
Lynn F. Cronemiller
George M. Fisher
John S. Forrest
Good Forest Mgmt. Co.
Paul N. Goodmonson
R. Wilson Hutchison
Leo A. Isaac
Alex J. Jaenicke
Stuart Moir
Paul M. Sanders
T. J. Starker and Son
Tree Farm Management Service
Van Vliet and McKimmy
K. B. Wood & Associates, Inc.

Pennsylvania
S. Gayley Atkinson
Clifford B. Carts
Ralph E. Chamberlin
W. G. Edwards
Reginald D. Forbes
Harvey R. Frantz
R. C. Fraunberger
LeRoy Frontz
Joseph F. Gray
Hyland R. Johns, Jr.
Robert Moore
Northeast Forestry Service
Northern Timber Services
R. B. Shannon & Associates
Walter W. Simonds
Henry Wessel
E. A. Ziegler

Rhode Island
Monterey L. Holst

South Carolina
John C. Billingsley
Bishop Brothers
Lewis M. Boice
C. A. Broadway
Lucas M. Dargan
Henry B. Fishburne
Forest Products Mgct. Co.
E. C. Haff
Giles C. Hall
Joseph F. Havel
Robert F. Knoth & Co.
Milliken Forestry Co.
Ernest Nutting
H. R. Oliver
A. P. Russell
Joseph A. Schmidt
Samuel S. Snook
South Carolina Forest Mgmt. Service
Wallace R. Stacy
S. Leigh Wilson

Tennessee
Ernest E. Ahler
Paul B. Davis
Green's Timber Service
M. E. Jelley
William J. Mills
Peter R. Mount
Charles R. Page, Jr.

Texas
L. L. Bishop
N. D. Canterbury
Stuart F. Clark
Ralph A. Davis, Jr.
H. C. Dickerson
Chris Nelson, Jr.
W. R. Owens
Frank Spearey
Charles T. Stealey, Jr.
W. W. Talbert
Tex-La Land Mgmt. Service

Vermont
Henry E. Duckett, Jr.
Halsey M. Hicks
Sable Mountain Corporation
Vermontwoods, Inc.

Virginia
Eastern Forestry, Inc.
E. A. Friend, Jr.
P. L. Hardy, Jr.,
Milford C. Howard
The S. G. Keedwell Co.
Edward A. McAllister
John McNair & Assoc.
R. B. Milne
Herman Work

Washington
I. V. Anderson
George L. Drake
William A. Eastman, Jr.
Greenacres, Inc.
L. D. Lloyd
A. R. Maris
Clyde S. Martin
Samuel A. Newman
W. H. Price
C. D. Schultz & Co., Inc
Jack E. Winn
Robert E. Worthington

West Virginia
Forest Land Management
Tillinghast & Reed

Wisconsin
George Banzhaf & Co.
Stanley S. Locke
Benson H. Paul
Edward F. Steigerwaldt
S. A. Wilde

Canada
John R. T. Andrews
Belanger and Bourget
M. W. Gormely
F. J. G. Johnson and Associates
Paul E. Lachance
Leon A. Nix
C. D. Schultz & Co., Ltd.

Central America
James A. Rogers

Philippines
Valentin Sajor

SOCIETY OF AMERICAN FORESTERS
Washington 6, D. C.

Foresters' Code of Ethics

Adopted November 12, 1948

The purpose of these canons is to formulate guiding principles of professional conduct for a forester in his relations with other foresters, with his employers, and with the public. The observance of these canons secures decent and honorable professional and human relationships, establishes enduring mutual confidence and respect, and enables the profession to give it maximum service.

Professional Life

1. The professional forester will utilize his knowledge and skill for the benefit of society. He will cooperate in extending the effectiveness of the forestry profession by interchanging information and experience with other foresters, and by contributing to the work of forestry societies, associations, schools, and publications.

2. He will advertise only in a dignified manner, setting forth in truthful and factual statements the services he is prepared to render for his prospective clients and for the public.

Relations With the Public

3. He will strive for correct and increasing knowledge of forestry and the dissemination of this knowledge, and will discourage and condemn the spreading of untrue, unfair, and exaggerated statements concerning forestry.

4. He will not issue statements, criticism, or arguments on matters connected with public forestry policies, without indicating, at the same time, on whose behalf he is acting.

5. When serving as an expert witness on forestry matters, in a public or private fact finding proceeding, he will base his testimony on adequate knowledge of the subject matter, and render his opinion on his own honest convictions.

6. He will refrain from expressing publicly an opinion on a technical subject unless he is informed as to the facts relating thereto, and will not distort or withhold data of a substantial or other nature for the purpose of substantiating a point of view.

Relations With Clients, Principals, and Employers

7. He will be loyal to his client or to the organization in which he is employed and will faithfully perform his work and assignments.

8. He will present clearly the consequences to be expected from deviations proposed if his professional forestry judgment is overruled by nontechnical authority in cases where he is responsible for the technical adequacy of forestry or related work.

9. He will not voluntarily disclose information concerning the business affairs of his employers, principals, or clients, which they desire to keep confidential, unless express permission is first obtained.

10. He will not, without the full knowledge and consent of his client or employer, have an interest in any business which may influence his judgment in regard to the work for which he is engaged.

11. He will not, for the same service, accept compensation of any kind, other than from his client, principal, or employer, without full disclosure, knowledge, and consent of all parties concerned.

12. He will engage, or advise his client or employer to engage, other experts and specialists in forestry and related fields whenever the client's or employer's interests would be best served by such actions, and will cooperate freely with them in their work.

Relations With Professional Foresters

13. He will at all times strive to protect the forestry profession collectively and individually from misrepresentation and misunderstanding.

14. He will aid in safeguarding the profession against the admission to its ranks, of persons unqualified because of lack of good moral character or of adequate training.

15. In writing or in speech he will be scrupulous to give full credit to others, in so far as his knowledge goes, for procedures and methods devised or discovered and ideas advanced or aid given.

16. He will not intentionally and without just cause, directly or indirectly, injure the reputation or business of another forester.

17. If he has substantial and convincing evidence of unprofessional conduct of a forester, he will present the information to the proper authority for action.

18. He will not compete with another forester on the basis of charges for work by underbidding through reduction of his quoted fee after being informed of the fee quoted by a competitor.

19. He will not use the advantages of a salaried position to compete unfairly with another forester.

20. He will not attempt to supplant another forester in a particular employment, after becoming aware that the latter has been definitely engaged.

21. He will not review the work of another forester, for the latter's employer, without the other's knowledge, unless the latter's connection with the work has been terminated.

22. He will base all letters of reference or oral recommendation on a fair and unbiased evaluation of the party concerned.

23. To the best of his ability he will support, work for, and adhere to the principles of the merit system of employment.

24. He will not participate in soliciting or collecting financial contributions from subordinates or employees for political purposes.

25. He will uphold the principle of appropriate and adequate compensation for those engaged in forestry work, including those in subordinate positions, as being in the public interest and maintaining the standards of the profession.

REPRINTS AVAILABLE

Reprints of this Consulting Foresters Directory are available from the Society of American Foresters, Mills Building, Washington 6, D. C., at the following rates, plus mailing charges.

Number of Copies			
			Additional
25	75	100	100
$50.00	$51.50	$53.00	$14.00

Files easy. Holds its edge. Cuts fast. Lasts long. That's OREGON.

7 out of 10 owners can't be wrong. My next chain'll be OREGON.

All I say is, with an OREGON chain on my saw I cut a lot more timber.

I bought an off brand. Now my production's off. From now on, it's OREGON.

7 out of 10* Owners Choose OREGON® Chain - How About You?

*Data from 1959 survey. The Woodcutting Industry. Details on request.

I'd get another OREGON chain if I could wear out the OREGON chain I have.

I've tried 'em all, and OREGON's got more of what it takes.

For rough going, any season, any timber, give me OREGON.

Keep Your Chain Saw OREGON-IZED®

©Copyright 1960

MICRO-MANUFACTURE Product of

OMARK Industries, Inc.
OREGON Saw Chain Div.

PORTLAND, OREGON • CINCINNATI, OHIO
GUELPH, ONT. CANADA • ADELAIDE, AUSTRALIA
KOPPARBERG, SWEDEN

Choose any saw; it'll cut more for you with an OREGON chain.

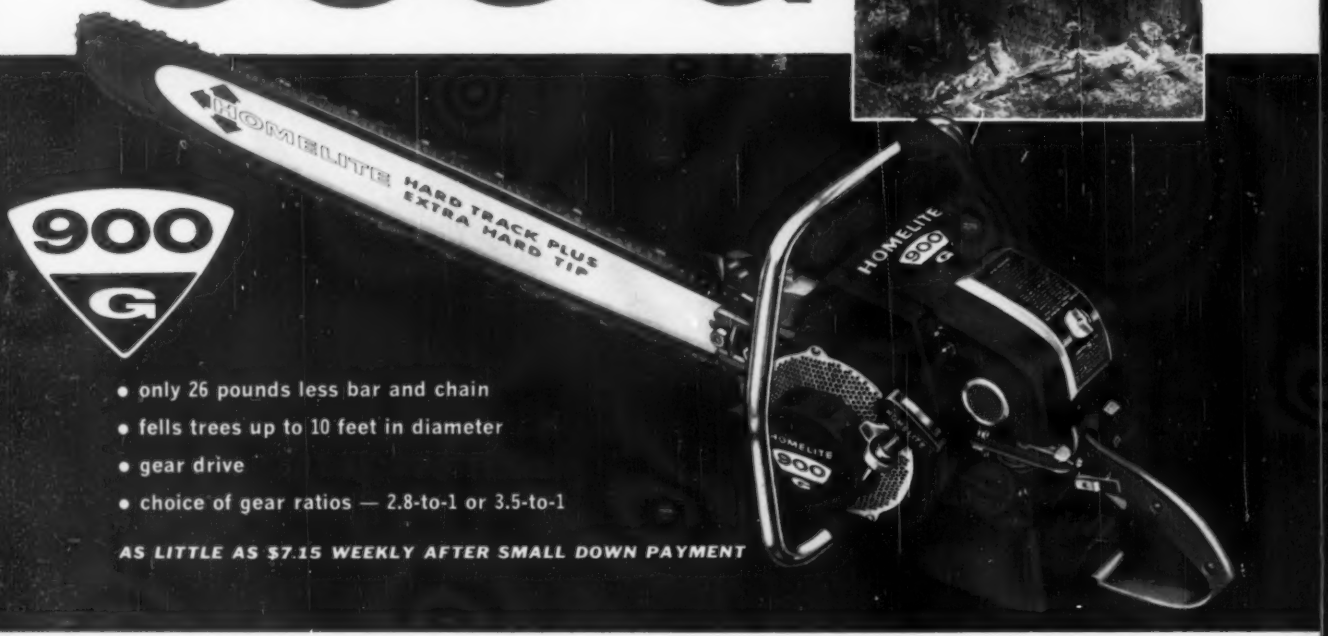
With 7 out of 10 choosing OREGON, it's time I got OREGON-*ized* too.

Make money with your saw? Put an OREGON chain on it.

"More work in less time with less effort..."

NEW HOMELITE 900·G

Mr. George Beechwood of Hamilton, Montana, writes: "I was told I could do more work in less time with less effort with a Homelite chain saw. It's true. I'm glad I got a Homelite."



- only 26 pounds less bar and chain
- fells trees up to 10 feet in diameter
- gear drive
- choice of gear ratios — 2.8-to-1 or 3.5-to-1

AS LITTLE AS $7.15 WEEKLY AFTER SMALL DOWN PAYMENT

You'll be glad you got a Homelite, too. For the tough job of professional woodcutting, there is no better chain saw than the new Homelite 900-G.

Designed especially for professionals, the new 900-G has many features that you'll appreciate. Its rugged gear drive fells trees up to 10 feet in diameter and the exclusive centered bar and pistol grip lets you lay 'em on a dime! New powdered steel clutch spider lasts longer, cuts downtime. Gears are wider and stronger, too, with a choice of gear ratios — either 2.8-to-1 or 3.5-to-1.

New Plastisol filter ends and undershroud design keep the air filter free of debris. Long flange chain guide plates feed the chain smoothly into bar groove, stop chatter, extend the life of both chain and bar. New fuel cap relief valve assures you of positive venting at all times.

See how you can earn more money faster with less effort. Ask your Homelite dealer for a free demonstration of the new Homelite 900-G. And be sure to see the rest of the full line of 8 new Homelite chain saws. You'll be glad you did!

NEW! Homelite Chain and Homelite Guide Bars make your cutting still more Profitable!

HOMELITE · A DIVISION OF TEXTRON INC.

4101 RIVERDALE AVENUE, PORT CHESTER, NEW YORK — IN CANADA, TERRY MACHINERY CO., LTD.

Find Your Homelite Dealer in The 'Yellow Pages'